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MOTHER NATURE SERIES

In Field and Forest

DUNN-TROXELL

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Mother Nature Series

IN FIELD AND FOREST

BY

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PREFACE

There is a great need of more genuinely worth-while reading material simple enough for children in the primary grades,—not merely unrelated stories and poems, but factual material organized along definite lines. When children begin to read for themselves, it is tremendously important that they be given bread and not stones or chaff.

The prime consideration in the preparation of this material has been the normal interests of children. The authors had in mind such questions as: Will the titles of the stories and the pictures lure children generally to want to read the book? Will those who begin to read a story wish to go on and on to the end? Will each story probably increase the desire to read the next? Will many children be likely to read the stories more than once? Will they want to tell what they have read in school or at home? Will they be likely to develop abiding interests in the things of nature all about them, interests that may give constantly increasing enjoyment throughout life?

No other comprehensive group of things makes a more nearly universal appeal to the interests of young children than the various forms of animal life, especially those forms that the children have some opportunity of studying at first hand. When the animal life is intimately associated with an attractive, interesting form of plant life the value of the material is greatly enhanced.

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In writing the stories, and especially in the final revision, care was taken to make the vocabulary conform as nearly as possible with the Thorndike and other word lists, but it is very important to remember that no one who wants to read is stopped, or much retarded, by an occasional unfamiliar word.

The interest in the stories and their educational value will be greatly increased if the children can follow up their reading with some study of things in the fields or woods, or of specimens collected by pupils and brought to the school. Such study leads to finding what is better than "books in the running brooks," and good in every living thing.

The book will probably best serve its purpose if the children are allowed to use it with a great deal of freedom. Efficient school economy, of course, requires that there should be regular class assignments for preparation, and regular recitation periods for reports of observations and experiences and for class discussions of ideas gathered from the book; but, if conditions are favorable, the children should be allowed to browse around in the book as others like to do, or to take it home to share it with others in a leisurely way.

—THE AUTHORS

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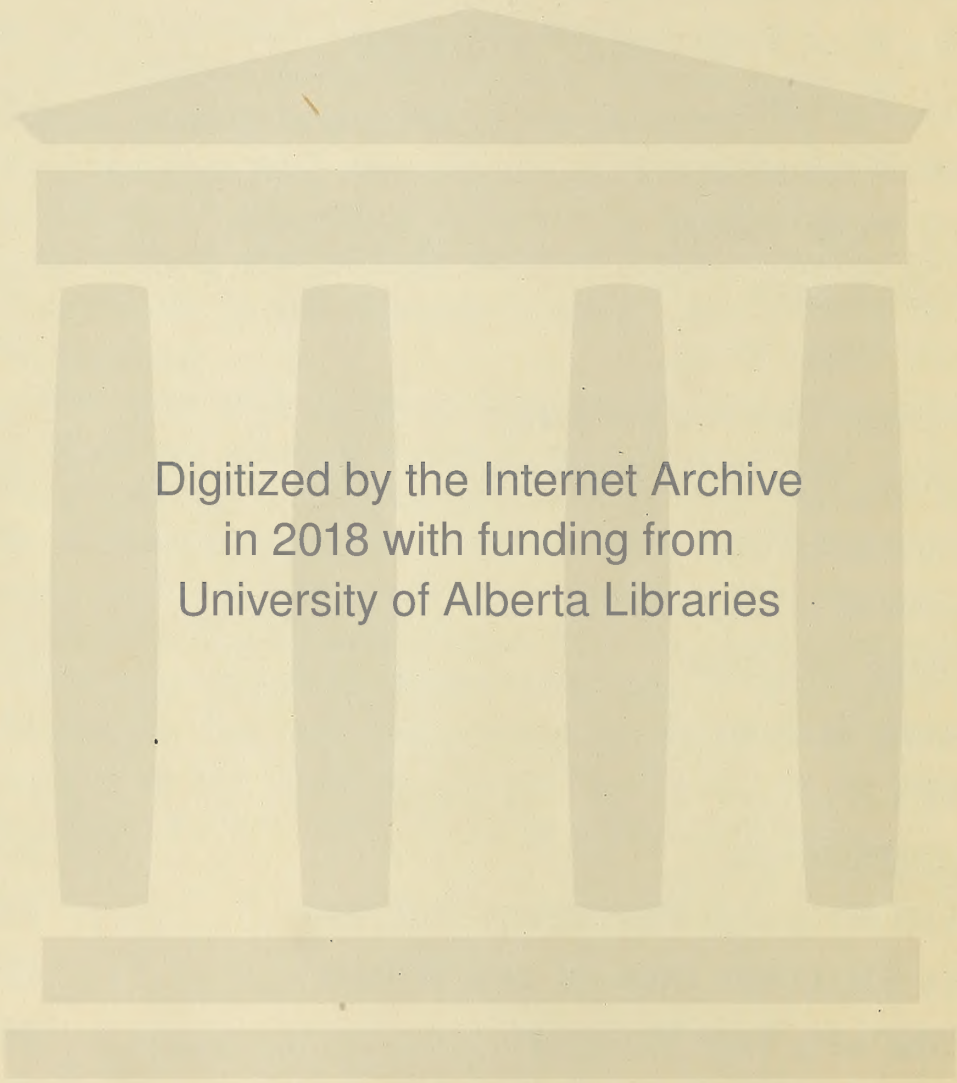
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Stripey and His Family

If you have ever seen a chipmunk, you know why Stripey was a good name for the little animal that this story tells about. For that matter, it would be a good name for any chipmunk, because every one of these little creatures has a white stripe bordered with dark brown on each side of its soft brown body.

It was very early in spring when Stripey and Mrs. Stripey went house hunting. They had been asleep nearly all winter, in snug holes under a stone wall. During that time they had slept soundly except on those days when the sun shone very warm and bright. Then they had wakened and run about outside the nest for a bit of fresh air, or had eaten a nut or a dogwood berry

from the pantries which they had filled the fall before. But most of the winter they had lain curled up like soft striped balls, and had slept soundly.

When spring came, things were different for the chipmunks. There was a great deal of work to be done. First a home would have to be made for the chipmunk babies that would soon be coming. Then a little later those babies would have to be cared for throughout the spring and early summer. In late summer the pantries of the chipmunks' home would have to be filled with food for the winter, for then there would be no more corn or berries or mushrooms or beetles to be found.

So, early in the spring, Mr. and Mrs. Stripey picked out the place for their home near an old stone wall. The home itself would be built underground, but the wall was a good protection. Nobody knew just how many chipmunks

lived near that wall. Almost any sunny day, from early in the spring till late in the fall, you might see a chipmunk running over the stones, or scurrying under them. Or you might see one of the furry little creatures standing upright on a stone, peering about to see

what he could see. Or he might be sitting on a flat stone with his forepaws at his mouth, nibbling a hazel nut, a grain of corn, a June bug, a strawberry, or a mushroom.

It seemed almost as though the wall had been made for sheltering chipmunks. Among the stones were many chinks and crannies in which the little animals could hide safely. Then, too, bittersweet vines and Virginia creepers grew over the wall and hid it from sight. The wood with its great oaks and beech trees and thick hazel bushes grew very close on one side. On the other side, across the road, lay fields, where oats and wheat and corn waved in the wind and ripened in the sunshine.

Mr. and Mrs. Stripey picked out a big flat stone lying on the ground against the stone wall, and started to dig at the edge of it. Bushes grew thick around the hole they made there. But this hole

was not to be the front door of the home, as you might think. There is never any newly dug earth piled about the front door of a chipmunk's home. That would make it too easy for an enemy to find it. A cat, a fox, a snake, a hawk, or some other enemy might be watching outside to catch the little animals as they started out for a morning scamper. So Mr. and Mrs. Stripey started to dig at a place far from where their front door was to be.

It was hard work for the little chipmunks to scoop out the long tunnels for their home. They dug down into the ground two or three feet, and there they made a big round room, nearly a foot across. This was the bedroom, and in it was the nest, a soft cozy bed made of grass and bits of dry leaves. It was such a big bed that it filled the room.

Then Mr. and Mrs. Stripey made a passageway between the bedroom and

the front door. They also dug a passageway between their nest and the pantry. This was to be used by the chipmunk family in getting something to eat when the weather was bad. By using the underground passageway they would not have to go outside into the rain or the cold.

The Stripeys made a rubbish room in their new house, too. There all the dirt and trash could be dumped. The empty shells and husks of all the food eaten inside their nest could be stored there. In that way the nest room could be kept as clean as a nursery should be.

All the loose dirt which the Stripeys dug out of the tunnels was carried out the back way and scattered. Like the front door, the back door was also kept plugged with earth when the chipmunks were not at work. No one was going to find their home if the Stripeys could help it.

In May five baby chipmunks were born in the nest. They were helpless little things at first, cuddling close to Mrs. Stripey in the big cozy nest. But they grew very fast, and by the middle of the summer all of the family were running in and out among the stones of the old wall, waving their furry tails, the dark brown and white stripes on their sleek sides shining in the sunlight.

How busy the chipmunks were during the bright summer days. They feasted on the things they liked best in the fields and woods. Sometimes they ate the strawberries which they found ripening in the garden. Sometimes they feasted on snails or caterpillars or May beetles. At other times they ate oats or corn or grass seed.

There was a big flat-topped tree stump that the chipmunk family must have thought was their dinner table, for it was the place they liked best to sit and

eat. They did not brush the crumbs from the top of their table when they had finished eating. They always left little piles of nut shells, or chaff from seeds lying about the stump and showing what they had had for dinner.

Sometimes in June there were piles of another kind of shell lying about the chipmunks' dinner table. These shells were the hard wings of the May beetles.

The chipmunks bit holes in the beetles' horny skins just as they bit holes in nuts, but the hard covering of the beetle was not good to eat any more than the nut shells. They were left on the stump when the Stripeys finished their suppers.

In the middle of the summer the Stripeys found more good things than they could eat, for berries and oats and corn were ripening all about them. But even though there was more food than they could eat, the chipmunk family did not let anything go to waste. They made pantries in many parts of the stone wall and in near-by hollow trees.

These storerooms were made to hold food for pleasant days when the family, out for a scamper, might want a bite to eat on the way. When chipmunks

are away from home and become hungry, they have either to go hunting for caterpillars, or beetles, or seeds, or berries; or else they have to go to their own storehouses.

Besides these storehouses that were scattered about outside the nest, there was the big storeroom in the chipmunks' home. All of these were filled with enough food to keep the little animals throughout the long winter. The whole family worked during the long days of summer and early fall. Before winter came, the Stripeys had stored away pints of chestnuts, acorns, cherry pits, beechnuts, dogwood berries, and seeds of all kinds.

But summer time was not all work time with the Stripeys. The little chipmunks were as playful as kittens, and they chased one another all over the rocks and logs that lay about their home. They raced along fence tops and

scampered up tree trunks. Even Mr. and Mrs. Stripey sometimes joined in the frolic.

There were some sad times for the Stripeys, too. The saddest time of all was the day when one of the chipmunk children strayed away and never came home again. This little chipmunk, who had never been very quick or strong, wandered too far from a good hiding place, and a weasel caught him before he could slip into a safe hole.

It was no wonder that the poor little Stripey baby got caught. For the weasels are the worst enemies that chipmunks have. They are strong enough to kill small rabbits and ducks, and their bodies and heads are so slim they can slip through very small holes. They run very fast, and they can even climb trees. Sometimes they go down into the very bottom of the chipmunks' burrows.

On another day Mr. Stripey himself

came near to being caught. He was feasting on acorns on the top of his tree-stump table, when he saw a shadow moving in the grass. In an instant a big weasel darted at him.

Mr. Stripey squeaked loudly with fear, gave a big leap, and rushed as quickly as he could for the nearest tree-trunk. The weasel ran through the grass close behind him. Up the tree went the chipmunk, and after him climbed the weasel, up, and up, for twenty feet.

Then Mr. Stripey jumped to the ground. He spread out his legs as he fell and so landed safely on all four feet. In less than a wink he was off again. By the time the weasel had climbed down the tree, the chipmunk was safe out of the way.

Mr. and Mrs. Stripey and their family were full of curiosity, as all chipmunks are. When the boy who lived on the farm across the road came through the woods, he could almost always see one of the family peeping at him. Sometimes a chipmunk sat on a stone close to a hole in the wall to watch.

If the boy came close, the curious little chipmunk slipped into the cranny in the rock as quick as a flash. But if the boy passed by without stopping, the chipmunk often followed him to see what he was going to do.

So the boy began bringing something for the Stripeys when he went through

the woods. Sometimes it was English walnut meats, sometimes it was a handful of oats, sometimes it was bread crumbs. By and by the chipmunk family came to know their friend. Then they came quite near and even took the dainties from the boy's fingers. But they were always a little shy, and quick to scamper off at any sign of danger.

So the summer went by, with work time and playtime, frolic and fear. There were sunny days when the whole family was out of the home, and cloudy or rainy days when all stayed inside and ate food from the nearest pantry.

As the fall days grew cooler and the frosts began to come, the little family spent a great deal of time in the warm nest under the stone wall. Sometimes they ate nuts and seeds from their pantry near by; sometimes they slept and woke and then slept again; sometimes in the middle of the day, when the sun

was warm, they left their nest and ran about in the bright sunshine.

As the days grew cold and wet, the chipmunks hardly went outside at all. Instead they cuddled down in their warm bedroom and slept soundly. But they did not curl up and sleep for the whole winter, as do the bears and woodchucks. On warm days, even in the middle of winter, they sometimes slipped out of their holes to run about in the sunshine.

In March the chipmunks felt that spring was coming very soon. That meant that the time for making new homes had come. The little chipmunks of last year were now full grown. They must make homes for babies of their own. So each of the young chipmunks left his old home and went out to find a pleasant cranny of his own. And, as summer came on, more chipmunks than ever scampered over the old stone wall and up and down the tree trunks.

Who Will Feed the Dickey-birds?

Who will feed the dickey-birds
on the garden wall?
Winter time is very big—
they are very small!

Who will feed the dickey-birds
on the frozen trees?
Every little twitter means,
"Feed us, if you please!"

Who will feed the dickey-birds
in the frost and snow?
See them on the chimney-pot,
cuddled in a row!

Who will feed the dickey-birds
till the days of spring?
Think of what they do for you
and the songs they sing!

I will feed the dickey-birds,
and when springtime comes,
Every little song will mean,
"Thank you for the crumbs!"

—UNKNOWN

Tree Tappers

"Tap, tap, tap!" Bobby woke from a sound sleep. He looked about the room. There was no one in sight.

"Tap, tap, tap!" Bobby thought someone must be tapping on the door.

"Father," he called, "someone is at the door." Mr. Burns went to the front door and opened it. There was no one there.

"You are mistaken, Bobby," said Mr. Burns. "You must have been dreaming."

"But listen, Father," cried Bobby. "Don't you hear that noise?" Mr. Burns listened.

"Tap, tap, tap!" came the noise again. It sounded as if it were outdoors. Mr. Burns went to the back door. But

there was no one there either. He looked puzzled.

"Maybe it's a brownie or a tree fairy," said Bobby. "Let's see." Bobby jumped out of bed as quickly as he could.

"Tap, tap, tap!" Bobby and his father ran to the window. This time the tapping seemed to come from the maple tree.

Bobby was sure that there must be a brownie in the tree. But how had a brownie climbed the maple tree, he wondered.

Just then Bobby saw something move. He looked more closely. Up near the big limb of the maple tree he saw something black and white. It wasn't brown, so it couldn't be a brownie at all. It was a small black and white bird. On the back of his neck was a spot of red.

"Tap, tap, tap!" It did sound as though the little bird were knocking at

a door. But nobody was going to let him in. The little insect that lived inside the wood of the tree would do anything to keep his caller out.

The little black and white bird was a downy woodpecker, and downy woodpeckers like nothing better for dinner than white grubs that live in trees.

The grub did not come to see what Downy wanted. But Downy didn't mind.

He knocked and knocked till he knocked a hole in the tree. Downy did not make a hole big enough to get into. He did not need to do that. All he needed was a hole big enough to get his tongue into. The woodpecker's tongue is his grub-catcher.

No bird has a better tongue for catching grubs than the downy woodpecker. He has a very long tongue, twice as long as his head. The end of it is a hard point, so that he can stick it into the grub like a little spear.

But this is not all. It would be hard to pull the grub out with a sharp-pointed tongue. The grub would slip off. So there are hooks or barbs on the sides of the woodpecker's tongue. They are something like the barbs on a fishhook, or on the end of a crochet hook.

The woodpecker's tongue is really like a long fishing hook, curled away in his mouth when he does not need it.

As soon as Downy had dug a hole deep enough to reach the grub, he stuck his tongue into it. Then he pulled his tongue from the hole and drew it back into his mouth, and that was the end of the grub.

It is a good thing for the trees that woodpeckers are so fond of grubs and of beetles, too. For if no one dug out the tree insects, they would go on eating and eating the wood. There would be hundreds and hundreds of them in every tree. By and by they would kill the trees.

So the woodpecker is a friend of the trees. He is always on the watch for grubs and beetles that might kill the trees.

But how can the woodpecker see the inside of the tree before he cuts a hole through the bark. He cannot, but his ears tell him when there is an insect inside. He taps on the tree. He can tell

by the sound his tapping makes whether there is a hole inside. If there is a hole, a grub is almost sure to be inside it.

The woodpecker's bill is almost as wonderful as his tongue. And his neck is almost as wonderful as his bill.

The woodpecker has no other tools with which to make holes. He has only his bill and his strong neck. With them he can make as good a hole in wood as a carpenter can make with his tools.

You might think that Downy and his wife would fall off the tree backward when they tried to dig a hole in it. Perhaps they would, if they did not have the right kind of feet and tail with which to hold on.

Sparrows and wrens and other birds that perch on trees have toes that curl around a twig and hold on to it. They have three toes in front and one behind. But woodpeckers' feet are not made

that way. They have two toes behind and two in front.

The two toes in front hook into the bark or wood on the side of the tree and keep the bird from slipping down. The toes behind and the stiff tail-feathers prop him up and keep him from falling away from the tree.

Little Downy not only digs his dinner out of the trunk of the tree. He makes his nest inside the trunk as well. He does this with his strong bill, too.

First the little carpenter chooses a decayed spot in a tree, where it will be easy to dig. Then with the little chisel on the front of his head he digs a tunnel a little way into the trunk. The front doorway is round, and just big enough for him to go in and out.

Next the woodpecker clears out a hole inside the tree, below the tunnel. His little wife helps him. They take turns. They make the hole deep and safe, so

the babies cannot fall out the front door. At the bottom of the hole they make the nest.

The babies' bed is made of fine chips at the very bottom of the hole. There will be four or five or six babies in the nest.

Downy is the smallest of all the woodpeckers. He has some big cousins. They are black and white, too, but there is

only one of them that looks much like Downy. That is the big hairy woodpecker. The cousin that most people know is the red-headed woodpecker.

Red-headed woodpeckers like posts and stumps as much as they do trees. Sometimes they make their nests in posts or stumps.

These noisy red-headed birds eat some beetles, but they do not dig all their food out of trees. They eat a great many grasshoppers. Sometimes a redhead flies out and catches a grasshopper as it hops along. Sometimes he catches one on the ground.

When there are a great many grasshoppers, the woodpecker does not eat all he catches. He puts some of them away in his pantry. His pantry is a crack in a post or stump.

Red Head does not always kill the grasshoppers before he stores them away. But he pushes them into the

crack so tightly that they cannot get loose.

Later in the fall, when there are not so many grasshoppers outdoors, Red Head eats some of the grasshoppers he has stored away. Sometimes his store of them lasts him nearly all winter.

People do not want only meat for their dinner, and neither do woodpeckers. All of them eat some berries, cherries, and wild grapes. Red-headed woodpeckers eat acorns and beechnuts, too. Sometimes they eat corn. But they like beechnuts perhaps more than anything else. They put a great many of them away for winter.

The woodpecker has all sorts of pantries for his beechnuts. Sometimes he stores the nuts in the hollow of a tree, just as the squirrel does. He brings pieces of bark and covers over his piles of nuts so that no one will find them. Often he hides them under the bark of

the tree. Sometimes he drives just one nut into a crack in the wood.

A beechnut or a grain of corn is very hard. How can the woodpecker crack it before he eats it? He does it with his bill, but not as the goldfinches and canaries do.

The woodpecker takes a grain of corn in his bill and puts it into a small hole in a tree. Then he hammers it in with his bill till it is fastened tight. Then he draws his head back and strikes the corn so hard with his bill that the corn breaks.

When there are plenty of beechnuts, the woodpeckers have plenty to eat all winter. When there is not much to eat, the woodpeckers have to go south for the winter, so that they may find food.

The Woodmouse

Do you know the little woodmouse,
That pretty little thing,
That sits among the forest leaves,
Or by the forest spring?
Its fur is red like the chestnut,
And it is small and slim,
It leads a life most innocent,
Within the forest dim.

It makes a bed of the soft, dry moss,
In a hole that's deep and strong,
And there it sleeps secure and warm,
The dreary winter long;
And though it keeps no calendar,
It knows when flowers are springing,
And it waketh to its summer life,
When nightingales are singing.

—MARY HOWITT

Two Tree Frogs

If, on a hot summer day, you hear a queer noise in a tree in your yard and you ask what it is, somebody will probably say, "The tree frog is croaking for rain." Or you may be told that it is a tree toad that you hear. For some people call the little animal by one name, some by the other. Many people think that the tree frog's croaking is a sure sign of rain, but other people say it is not.

You may hear a tree frog almost any day, but you will have to watch and hunt a long time before you see him. He is very tiny, not more than two inches long. He may be green or gray or brown.

If he is resting on a leaf, he is green.

If he clings to the gray bark of a tree, he is gray. If he rests on brown bark, the tree frog is brown. The tree frog changes his color somewhat to match whatever he sits upon. And how still he does sit! For hours and hours, through the long summer day, he never moves. He looks like a little knot on the side of the tree.

If you had eyes that could see at night, such as the owl has, it might not be hard for you to find the tree frog. For at night he goes hunting all over the tree in which he lives. If a mosquito buzzes too near him, out goes his tongue, and down the frog's throat goes the mosquito. The tree frog catches ants, gnats, flies, and lightning bugs; he does not seem to care which he eats. Down his throat they all go.

If bugs do not fly near enough for the tree frog to catch them easily, he even jumps after them. You will think,

of course, that jumping from one limb of a tree to another is not a very safe thing for any frog to do. Jumping is all right for birds, that have wings, but it seems to be unsafe for a frog that has no wings at all.

Suppose the tree frog should miss a limb and fall! That danger does not matter to him. For on the bottom of each of the tree frog's toes is a round sticky pad that catches and holds on to

whatever it touches, just as the fly's foot does. A tree frog can even climb straight up a pane of smooth window glass. And if he wants to do so, he can even walk on the under side of a leaf. Then, too, whenever he jumps, one of his sticky-toed feet is sure to catch onto some leaf or twig before he falls very far.

Now, this hopping, leaping little creature you find has not always been a four-legged tree frog with pads on all his toes. Once he had no toes at all, no feet, and no legs. At that time he was a tiny egg, sticking to a blade of grass that floated on the water. Later he was a wee tadpole that was almost all tail. He did not live in the trees then, but down in a little pool in the marsh.

When the apple trees were blooming, the mother tree frog took a trip to a low marshy place. A great many other

mother frogs went along, too. The little pools in the marsh were like great lakes to these tiny creatures, for even though the frogs were full grown, they were only about two inches long.

It was a pleasant time of year to go traveling. Skies were blue, birds were singing, and spring flowers were blooming along the wayside. There were already many other frogs and toads down in the marshes and little ponds. They were paddling and swimming and splashing about in the shallow water.

And sing! Those frogs sang so loudly that you could hear them a quarter of a mile away. There were so many of them that it sounded like a frog concert. The big bull frog sang bass, "Jug-o-rum! Jug-o-rum! Jug-o-rum!" The little spring peepers that had been in the pond ever since the snow began to melt sang a high shrill tune, "Knee-deep! Knee-deep! Knee-deep!" Per-

haps they were trying to tell the tree frogs who had just come that the water was not deep enough to drown them.

But the big frogs need not have bothered, because the tree frogs were not afraid. Their feet are made for climbing trees, but they are made for swimming, too. Their toes are webbed like those of other frogs. So, as soon as they got to the puddles, in they waded. Soon they were swimming about

and singing as loudly as the others. They were not singing the same song as the others, though. They were singing their own song, the one that people say is a sign of rain.

All kinds of frogs and toads come to the ponds in the springtime. The dusty brown toad that lives in the garden all summer, the tree frog that croaks for rain, the spring peeper, and many other kinds come hopping, hopping, from the places where they have been asleep all winter. Some come early and some come late, but at one time or another all of them come to the pools and puddles in the marshes. Should you like to know why? They come there to lay their eggs.

After the mother tree frogs have laid their eggs they do not pay any attention to them. They go back to the gray bark and leafy branches they left and let the babies that are to hatch out of the eggs take care of themselves.

Before long the eggs begin to hatch, but it is not a frog or toad at all that squirms free of the shell. A tiny tadpole comes out, and wriggles its tail in the water. Soon it is scraping green scum from the water weeds with its horny little jaws.

Tadpoles are only about a quarter of an inch long when they hatch and they are nearly all tail. At first they are pale yellow, but soon their color begins to get darker. Some of them have tails that are nearly red. Some of them are almost black.

The baby tadpoles grow very fast, and in three weeks their hind legs are beginning to show like wee buds on each side of their tails. In another month they are pretty green frogs, about half an inch long. They have four legs, and their tadpole tails are disappearing.

When the tiny, long-tailed tadpoles hatch, not one of them can breathe out

of the water any more than a fish can. They have to stay under the water. But as their legs grow, the way they breathe changes. When they are ready to hop out on land, they can not breathe under water any more.

Then off they go, hippity-hop, to find trees and vines where they can live all summer, and catch all the spiders and flies and caterpillars they want. They eat a great deal, and by the end of the summer most of them are nearly grown.

The big tree where you heard the tree frog singing is just the kind of a tree that a tree frog likes. There is moss growing on some of its bark, and that means there are cool damp places where he can rest on hot summer days. There are little insects buzzing about and crawling on the leaves, and that means there is plenty for a tree frog to eat if he will hop around at night and

look for it. So our tree frog picked this tree for his home, and from that time on, all through the warm summer, he has lived in it.

During the day the little tree frog sits and dozes most of the time. Sometimes he rests on a limb. Sometimes, with his sticky toes, he clings to the under side of a leaf. He looks so much like what he is resting upon, and he sits so very, very still, that you could look straight at him without seeing him at all.

Usually the only time you know the frog is in the tree is when he is calling. Maybe it is evening and the air is getting cool and damp, and he is telling how good it feels. Maybe it is the middle of a sunny day, and he is croaking because he is too hot and he does not like it. Or maybe a cloud has just covered the sun, and he is singing because he likes the shadow. But you

never can know just what he means, because he always says the same thing. It is the only sound he can make.

These little frogs are called common tree frogs, because so many of them live in trees and vines near our houses. Almost everybody knows about them, but not many people know that the spring peeper that sings in the marshes is a kind of tree frog, too. Then there are a great many others in the tree frog family.

The singing of the spring peepers is one of the very first signs of spring. At times you may hear them down in the marshes even when the snow is just beginning to melt. The edges of the little brook are still covered with ice, but the alder tassels are already waving in the wind when the peepers begin to sing. It is not the brook, or the wind, though, that makes the sound you hear, "Knee-deep! Knee-

deep! Knee-deep!" It is the spring peepers.

The swamp is full of these little frogs, even though not a single one may be in sight. Some are swimming in little pools, some are resting on floating twigs, and some are hanging under leaves, or clinging to bits of dry grass. There are hundreds of them.

Some spring peepers seem to be gray, some yellow, some brown, some almost black. Like the common tree frog, the peepers change their color to match whatever they are sitting on. Those that rest on gray twigs are gray, and those that cling to dry yellow grass are yellow. If a yellow peeper hops onto a black log, his color changes from yellow to black. If a brown one climbs upon a gray stone, his color changes from brown to gray. It is no wonder you cannot easily find a spring peeper since he changes his color to match whatever

he is sitting on and is, besides, only about an inch long.

If ever you do see one of these little frogs when he is peeping, you will see a funny thing. The wee frog begins by puffing out his throat like a bubble. Bigger and bigger the bubble grows, till it is half as big as he is. Then it begins to get smaller again, and you hear the

sweet little call, "Knee-deep! Knee-deep! Knee-deep! Knee-deep!" When the bubble is all gone, the peeping stops.

When the common tree frog is calling, he puffs out his throat just as the peeper does. Each of these little frogs has a whistle in his throat somewhat like the rubber balloons that grow round and fat when you blow into them, and then screech and shrink when you take them away from your mouth.

The eggs of the peeper are very tiny, really no bigger than small seeds. The mother peeper usually fastens them to stems and leaves in the water. Sometimes, though, she just drops them into the water itself, and then they sink to the bottom of the pond. In a week or two the wee tadpoles hatch out, and begin to wriggle about among the water weeds and rushes.

Then come dangerous days. The pond is full of creatures that like to make a

meal of tender tadpoles. Water spiders, with their eight spreading legs, pounce upon them. Water beetles grab them with their horny jaws. Water bugs run their bills into the soft bodies of the wriggling little tadpoles. Green frogs and snakes swallow them whole. Even the dragon flies eat them.

It is a wonder that any of the tadpoles live to grow up and become tree frogs. But there are great numbers of them hatched out, and in June hundreds of them still live to climb out of the water and hop along the bank. They are not quite like old frogs yet, for they still have some of the tadpole tail left. But their hopping legs are ready for use, and away they go.

From now on these little frogs eat other creatures, just as other creatures ate their brothers and sisters when they were tadpoles, too. Gnats, ants, mosquitoes, small worms, and flies find

themselves slipping down the peepers' throats.

The little frogs go hunting in all kinds of places. Some hide and hunt among the berry vines that grow close to the ground. Others climb tall ferns. Some hop about on tree trunks or find their way to the tops of the alder bushes. Some live in vegetable gardens. Others like flower gardens best. Now and then one may be found in a greenhouse, where the air is warm and damp, as all frogs like it to be. Some of them even climb to the tops of the tallest trees.

The spring peepers are very quiet in midsummer. Down in the marshes there are other frog voices, but not one is calling, "Knee-deep! Knee-deep! Knee-deep! Knee-deep!" Up in the trees the little weather man blows his hoarse whistle, but the peeper does not answer him. But that does not matter.

Long after the common tree frog has stopped his tune, the peepers will be singing.

Sometimes late in the fall you hear one of these frogs peeping up in a tree and you think it is a bird. It is not until snow begins to cover the ground that they hide themselves away, to sleep till it is time to come back and say that spring is coming again.

Thistle-seed

Thistle-seed, thistle-seed,
  Fly away, fly,
The hair on your body
  Will take you up high;
Let the wind whirl you
  Around and around,
You'll not hurt yourself
  When you fall to the ground.

—FROM CHINESE MOTHER GOOSE RHYMES

Baby Seed Song

Little brown brother, oh! little brown brother,
Are you awake in the dark?
Here we lie cozily, close to each other:
Hark to the song of the lark—
"Waken!" the lark says, "waken and dress you;
Put on your pretty green coats and gay,
Blue sky will shine on you, sunshine caress you—
Waken! 'tis morning—'tis May!"

Little brown brother, oh! little brown brother,
What kind of flower will you be?
I'll be a poppy—all white, like my mother;
Do be a poppy like me.
What! you're a sunflower? How I shall miss you
When you're grown golden and high!
But I shall send all the bees up to kiss you;
Little brown brother, good-bye.

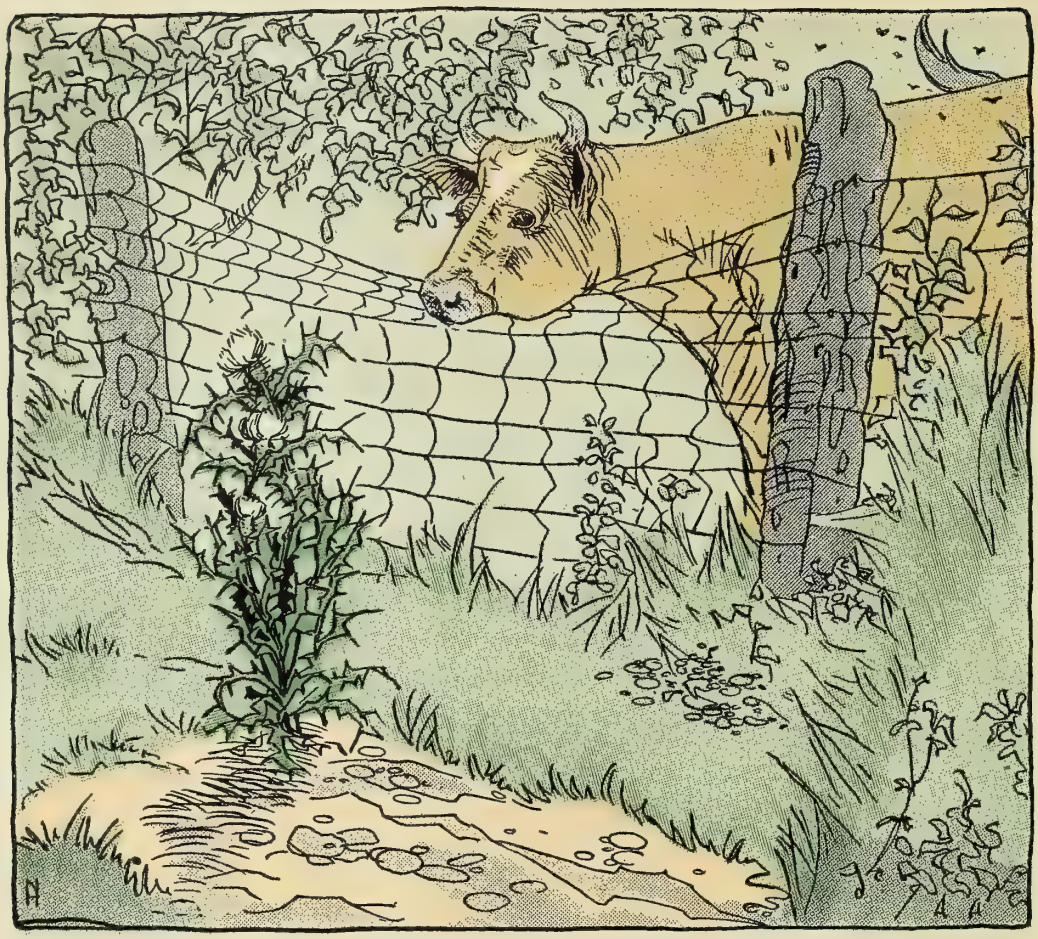
—E. NESBIT

Mother Thistle's Family

A large family of thistles lived on the roadside. They had lived there two years. When they were just seeds, they had lived in the pasture.

The mother of the family was a big thistle plant. It made no difference to her that the cows fed in the pasture where she made her home. They did not eat her leaves. On the edges of her leaves were many spines. The spines looked like short needles. They were very stiff and had very sharp points. If the cows tried to eat her green leaves, the sharp spines hurt their lips, and they soon turned away.

So Mother Thistle was quite safe in the pasture. She grew tall and strong, and by and by every large branch had



a beautiful purple flower. Children who came to the pasture to play, saw the pretty flowers, and tried to pick them. But there were spines on the flowers, and on the stems, too. The spines pricked the children's fingers, and they, too, turned away.

Mother Thistle, you see, was quite able to take care of herself and of her

children too, even though she had hundreds of them. She kept them all inside her big spiny flowers.

Each flower was a nursery full of children. There were about a hundred children in every nursery. Anybody who picked just one of those purple thistle heads stole about a hundred children all at one time. No wonder Mother Thistle wrapped them safe in sharp spines.

The top of the thistle head looked just like a purple powder puff. But each of those powder puffs was really a whole bunch of her thistle babies in purple dresses.

Little human babies wear white dresses. Later their mothers make pretty pink and blue dresses for them. But thistle babies have purple dresses first. When they are older and ready to leave their mothers, they wear their white dresses.

Now where could Mother Thistle find

white dresses for her children? Why, she had them with her all the time, packed down close inside the spiny green nursery walls. After a while the purple dresses would fade and dry up in the sun and fall off. Then the white dresses would grow up and push out of the spiny nursery walls.

That began to happen one day. The big thistle blossoms in the meadow were not purple any longer. They were the fluffiest, softest white silk puffs in the world. All the hundreds of thistle children had put on their going-away clothes.

Then there came a little puff of wind, a gay little breeze playing through the pasture. It blew over the fluffy white thistle heads, and all at once a dozen of the thistle children jumped out of their nurseries and flew away.

Would you believe it? They wore their pretty white dresses upside down.

At the bottom of each was a tiny seed that was really a thistle child. The white fluff now looked like a white silk umbrella over the head of the thistle seed.

The breeze got under the white umbrella and blew it up and away, and the thistle seed baby flew away with it. By and by another breeze came, and some more thistle children flew off. After a while all of them had flown away.

"Some flew east and some flew west,
And some flew over the cuckoo's nest."

The first dozen young thistles that left home flew into a corner of the fence by the roadside. They dropped to the ground and lay on the warm brown earth.

There these little thistle children went to sleep and slept all winter. The leaves on the trees all about them turned red and yellow and brown, and fell thick over them. The snow came and spread a soft blanket over their blanket of leaves. And the little seeds slept and slept.

Next spring first one and then another of the thistle seeds began to grow. They made tiny green leaves that grew flat on the ground. The cows did not eat them, for they were spiny, just like their mother.

All that summer the young thistles grew, but they did not become big tall plants now, as their mother was. They were just round flat bunches of spiny leaves. It takes two years for a thistle

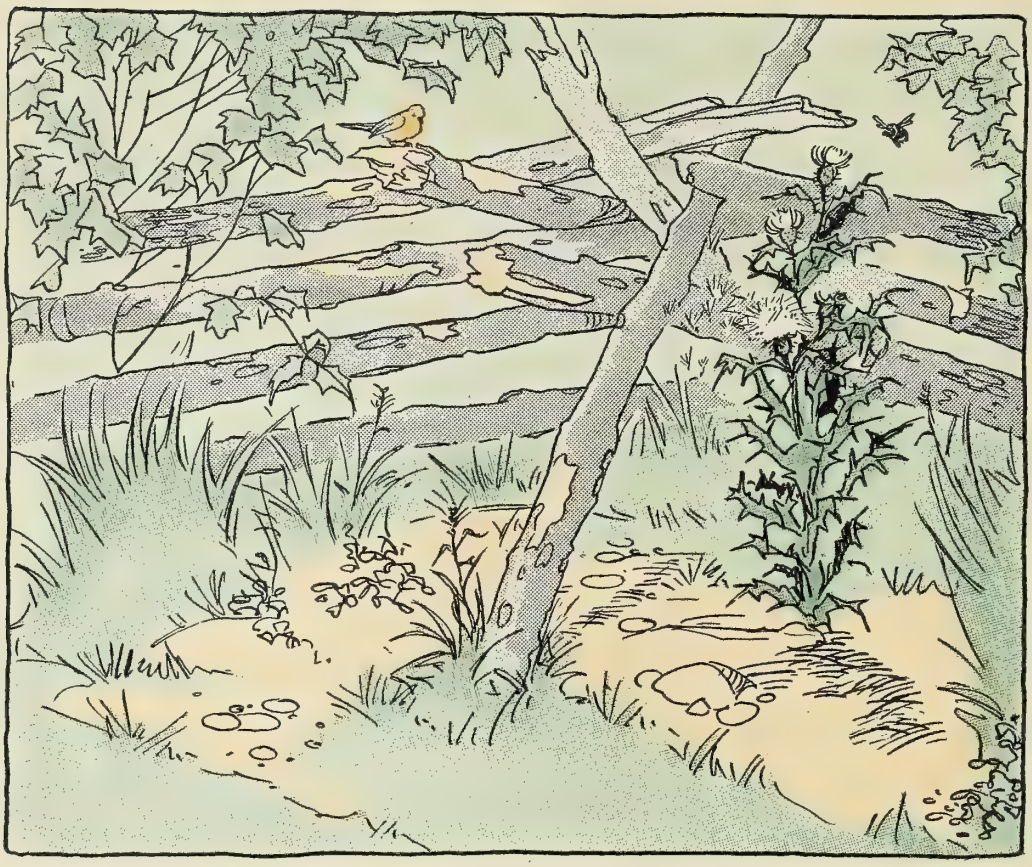
plant to grow tall and have flowers and make seeds.

But the little thistles had made strong roots that held them firm in the ground. When the cold came again and the snow fell, the roots still lived. They slept and slept as the little seeds had slept the winter before.

Then came another spring. The sun shone warm, the snow melted, and the thistle roots woke up. They sent up new leaves and then strong stems. By and by the thistle plants were as big and strong as their mother was.

Now spiny buds began to grow upon the stems. After a while the buds opened into thistle heads. They were just like the thistle heads on the mother thistle in the pasture. They looked like purple powder puffs, but they were really nurseries full of thistle babies with purple dresses.

The seed babies could not yet leave



the nursery, for their white silk sails had not grown out yet. But they had many visitors. All through the sunny day the butterflies and honeybees came, and the big booming bumblebees. In the evening moths came to call, too.

Every one of those hundreds of thistle children had a little cup of sweet nectar, and there was always enough for all who came. The visitors helped them-

selves to the nectar with their long tongues just as we use straws at a soda fountain.

Sometimes, a bee or butterfly brought a gift—some pollen from another thistle flower. Pollen is the yellow flower dust that you can find on the top of almost every kind of flower. It grows in the flower bud and it is scattered in different ways from the open flower.

Each thistle flower has pollen on its own purple blossom, but the thistle flower needs some pollen from another thistle if the baby seeds in its nursery are to grow. Sometimes the summer breeze carries the fine yellow dust from the purple head of one thistle to another; more often a bee, wandering from flower to flower brings it on his feet from a thistle where he has already alighted for a sip of nectar.

The summer sunshine and warm rain, the thistle pollen brought by the bees and

breezes, and the sap constantly flowing up through the roots and stalk of the mother thistle to her seed babies made the seeds grow and grow till they were crowded in their thistle-flower nursery.

The purple baby dresses dried up and fell off. The white silk dresses that were to be more like umbrellas or wings or sails grew too. The thistle heads changed into white silk puffs.

Then one day the wind caught up and scattered the thistle children. It took some of them sailing to a far-off spot in the pasture. Next year there will be a new family of flat green thistles growing where they fell. And the year after that there will be more purple flowers full of white winged seeds. And so the story goes on forever.

Bomba, the Cave Dweller

Early Life of a Queen

Until Bomba was quite grown she had never seen the sunshine. Not that there was no sunshine, for Bomba's home was in the middle of a lovely sunny meadow. Clover blossoms had covered the meadow in June. Now it was late summer, and yellow and purple flowers were blossoming everywhere.

But Bomba had never seen clover blossoms. She had never seen the goldenrod and purple asters. Her home was in a dark little cave in the ground, and she had never been outside.

But Bomba's mother and older sisters had been out in the bright sunshine. They had hummed and buzzed over the

clover and sucked its sweet nectar. After the clover blossoms were gone, they had still gone out every day to hunt for sweet nectar in other flowers.

The little home in the ground was full of little sisters and brothers that had to be fed. Some of them were just babies. Some were half-grown. Some were nearly grown and ready to help take care of the rest of the family. A few of them were as big as Bomba.

Bomba and her larger sisters were the most important children in the family. They were young queens. That meant that one day they would have homes of their own. They would have big families of children like themselves and their brothers and sisters.

Bomba was a very big, beautiful bumblebee. So were all the young queen sisters. They had velvety bodies, striped with black and yellow. Their four wings did not look large enough to carry such big bodies through the air. They looked something like flies' wings. But they were smoke-colored.

Even though the other sisters were not so important as the young queens, the bees could not have got on very well without them. They were their mother's helpers.

When there had been only a few babies, the mother had taken care of

them herself. But as the oldest sisters grew up, it was they who fed and cared for the new babies.

These worker sisters were not nearly so large as Bomba and the young queens. They would never have homes of their own. They would stay all their lives in their mother's home and take care of their little sisters and brothers.

In the beginning every little bumble-bee was a tiny white egg, which the queen mother had laid. After the eggs hatched, they were wee white grubs, like tiny white worms.

The worker sisters fed these tiny grubs honey, and they grew and grew. That is why the worker bees went out every day to hunt for flower cups filled with nectar. The babies ate a great deal, and it all had to be brought in from the flowers by the worker sisters.

By and by the babies, one by one, spun cocoons for themselves and went

to sleep. When they awoke they had wings like their mothers and older sisters. They were grown bumblebees.

Just two days ago Bomba had come out of her cocoon. She found herself in a warm, dark little room. There were some other cocoons in the room. There was a big pot of honey near the door. Many of the little worker sisters were running about at their daily tasks. They brought honey to feed Bomba.

At first Bomba's wings were soft and weak. But she ate more honey and waited, and the wings grew stronger. Now she was ready to fly out of the dark home nest into the sunshine. She was ready to find out what the world that she had never seen was like.

It was a bright sunny day in early fall when Bomba started off to see the world. From now on she would have to look after herself. She would never come back to the home nest again.

Never again would Bomba's little worker sisters find nectar and bring it to her. But she would have one good big meal before she left. She stopped by the honey-pot on her way out, and ate and ate till she could eat no more.

Then Bomba crawled out of the front door of her home, out onto the grass that grew all around it. How bright the sunshine was! How warm and sweet the air!

Bomba spread her new wings, that she had never tried before. She sprang up into the air and was off, as if she had been flying all her life.

Now a happy time began for Bomba. Every day she visited the flowers for their nectar. She crept into roses and big pink and blue morning-glories and dipped her long tongue deep down to find their sweets. She pulled open the tightly closed lips of the snapdragons and crawled inside. She clung to the

tops of the big purple thistle blooms where butterflies and honeybees were feasting too.

Every night the busy little bee found some snug hole in a stone wall, or some other crack just big enough for her to creep into. Here she rested and slept, safe and warm, till the sky was blue and full of sunshine next day.

But as the days passed, the air grew cooler. The nights began to be so chilly that it was no longer snug and warm in the cracks and crannies where Bomba had been sleeping.

If Bomba had been like her little sisters, this would not have made any difference. She would have worked and eaten in the daytime just as she had always done. At night she would have gone to sleep just as she had always done in the home nest.

By and by there would have come a night that was colder than any she had

ever known. Then she would have gone to sleep for the last time. Next morning she would not have wakened.

But Bomba was not like her little sisters. Bomba was a queen, and queen bumblebees do not die when winter comes. They go to sleep. When spring comes they wake again. Then they make homes for themselves and lay eggs.

Soon there are many bumblebees humming and buzzing over the clover fields and sucking the sweet nectar from the flower cups, which have come out to enjoy the bright sunshine. If it were not for the queens, there would be no bumblebees in the spring meadows.

So, when the days grew cooler and cooler, something told Bomba that it was time for her to find a safe place to spend the long, cold winter days. Something even told her the sort of place she should find.

It must be a hole in the ground, deep enough to be safe from the biting winter winds. It must be on the north side of a slope. For if it were on the south side, the warm sunshine might melt the snow blanket off her too soon in the spring.

A Winter in Bed

Bomba had never seen snow. She had never felt the biting cold of winter. But, just the same, she began to look for a place where she would be safe till spring should come to waken her.

At last Bomba found a spot that would do. It was on the north side of a dry, sandy bank. There was already a small hollow in the sand. Bomba began to dig a narrow tunnel, about three or four inches deep, and just large enough for her body to pass through.

At the end of this tunnel she made a little round room where she could curl up and go to sleep.

It took Bomba several days of hard work to finish her snug winter home. Then she made a good-by visit to the fall flowers that were still standing in the meadow and the garden. She drank as much of their sweet nectar as she could. She buzzed slowly about.

But Bomba was feeling very sleepy. The flowers were looking sleepy, too. Even the sunshine looked sleepy. So, as night came on, Bomba crept into her bed and curled up for the winter.

The days grew shorter and colder. In the long dark nights the cold winds blew, and the heavy snows fell. All the flowers were frozen. The butterflies and many of the birds were gone. But Bomba knew nothing about all this. She slept on and on and on.

The shortest day of the year came. Then came Christmas. But Bomba knew nothing about Christmas. She still slept while children everywhere were hanging up their stockings and dancing about their Christmas trees.

The days began to grow longer. New Year's Day came, and Valentine's Day, and Washington's Birthday. Snow had been on the ground for weeks, smooth and shining. The sun

climbed higher in the sky every day. The air grew warmer. The snow began to melt in the warm spots where the sun shone longest.

Pussy willows blossomed in the damp meadows. Flower roots down under the ground felt the warming sunshine and began to send up shoots. Buds swelled on the bushes and trees. Crocus blossoms pushed their yellow and purple heads out of the earth. The red maple trees burst into bloom. Dandelions shown in the new grass.

Then Bomba began to stir in the little round room where she had slept so long. She crept slowly out through her narrow tunnel. She again saw the sunshine, just as she had done when she first left her mother's home so many months before. She smelled the sweet damp odors of the spring day.

Bomba crawled up into the sunshine, and flew off to find breakfast. She

was hungry, and no wonder. Not a mouthful had she eaten since she went to sleep months and months ago.

There were no asters and thistles and snapdragons now. But Bomba found that the spring flowers had nectar cups, too. Their nectar was as sweet as any she had ever sipped. She buzzed from one to another, feasting as long as the sun was high and warm. As the air grew cooler in the afternoon, she found her way back to her snug bedroom.

A Busy Summer

The spring days and nights passed. At first there were flowers only here and there. Bomba found plenty of nectar for herself, but she did not think that she could find enough to feed a family of children.

But by and by there were flowers everywhere. The apple trees were like

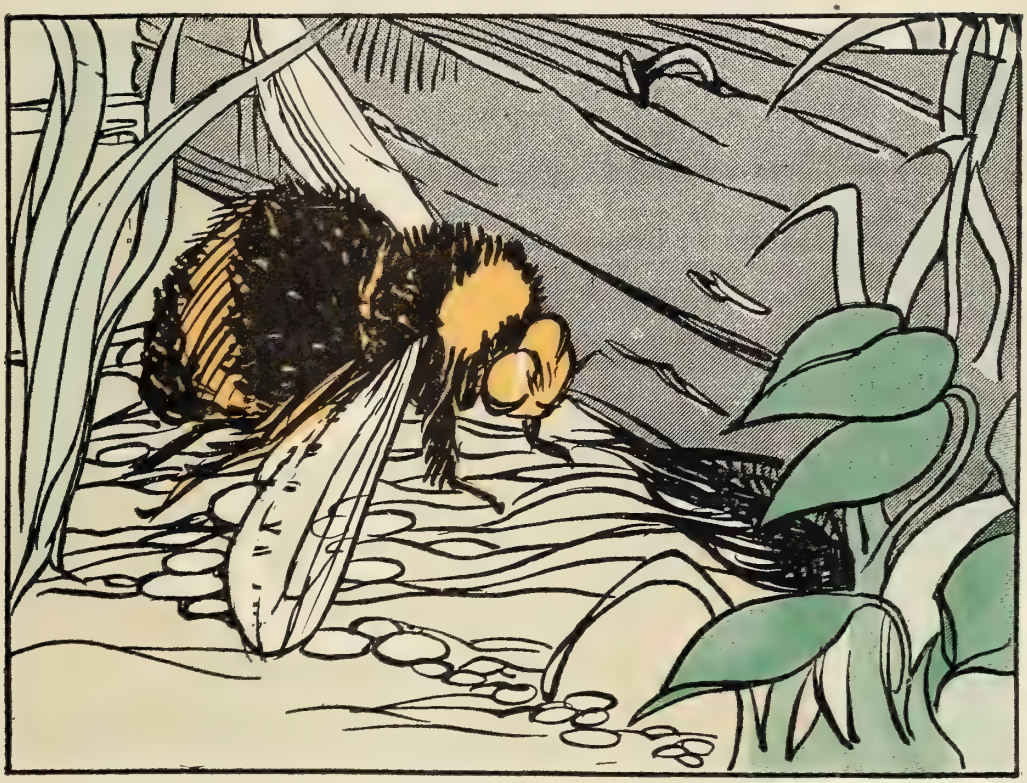
big pink and white bouquets. The locust trees hung themselves with sweet white flowers.

Then Bomba began to make a real home for herself. It would have to be a bigger home than her winter bedroom. There must be room for a whole family of children. It would be hard to make this home big enough if she had to make it all by herself.

So Bomba looked about for a house that someone else had already built. The nest of a little field mouse might do, or perhaps the home of a striped ground squirrel.

By and by Bomba found just what she wanted. It was a good-sized hole in a sloping bank. There was a narrow tunnel that led from the outside into the burrow. The family that had lived in it last year had left it very untidy, but Bomba soon set it straight.

Then the busy queen began to build



a honey-pot. It was like the one that had stood near the door in her mother's house. You might guess and guess without guessing where she got the wax to make it. She found it on the underneath side of her own body, in little pockets. If she scraped it off, more gathered there, so long as she ate plenty of honey.

Out of this dark yellow wax Bomba made a big, round bowl. Then she

emptied into this bowl all the honey that was left in her crop, and went out to get more from the flowers.

When Bomba came back she was loaded down. Her crop was full of honey. The baskets on her hind legs were heaped with pollen. She put the honey into the honey-pot, and dropped the pollen on the floor. Then she flew out for more honey and pollen.

All day Bomba worked, and by night-fall she had a good store of both honey and pollen. Now she was ready to make her nest and to lay her first eggs.

In the middle of the room Bomba made a heap of short, dry grass. Then she took the pollen she had brought in, and mixed it in her mouth into a stiff paste. She made a small ball which she put in the center of the nest.

Then Bomba scraped some more wax from her body, and built a little cup, or cell, on top of the pollen paste. In this

little cup she laid about a dozen eggs. Then she covered the cell over with a little wax lid.

When the eggs were laid and covered over, Bomba sat on them exactly as a mother hen sits on her eggs. It was well that she had a good store of honey in her honey-pot, for she did not want to leave her precious eggs.

In a few days the eggs hatched, just as Bomba herself had done, into tiny white grubs. But there were no older sisters to feed these babies. By and by they would be grown, and would be able to help Bomba with other babies. But now Bomba had to do all the work.

Now indeed Bomba was as busy as a bee. She had to fly out to the flowers for honey for her hungry brood and herself. At first the little grubs ate the pollen paste their mother had put into the nest for them. Later she fed each of them with honey from her mouth.

At last the babies were big enough to spin cocoons around themselves. Then they all went to sleep to wait till their wings should grow.

But Bomba could not sit down and rest while her babies slept. She laid more eggs. She made more pollen paste and another wax cell. She laid five or six eggs in the cell, and covered it over as she had covered the first one.

Bomba had to build up the sides of the honey-pot, too, for it would take a larger store of honey for her growing family. When she had time, she tried to cover both the new-laid eggs and the sleeping cocoons with her big, furry body, to keep them warm and to help them grow.

It was a happy day when the first of Bomba's children broke out of their cocoons. They looked very much like their mother, but they were not nearly so big as she. But they were good,

helpful little daughters, and they very soon set about to help Bomba with the work of the nest.

The family grew very fast now. The worker daughters flew out to the flowers for honey and pollen. They built cells for the new eggs, and kept the honey-pot filled. Sometimes they stored a little honey in the old wax cells that had held the babies before their wings had grown. They were not very careful housekeepers. We should not think of putting our food away in our babies' cradles. But the bumblebee family did not seem to mind.

Bomba did very little now except to lay eggs. Now and then she flew out into the sweet warm sunshine for a little while. But she did not need to bring anything into the home. The little workers did that for her.

For a long time there were only little daughters hatched in the nest. But

late in the summer Bomba laid some eggs from which came bumblebee sons. They were handsome bees, but they did nothing to help with the work. They flew about in the sunshine, and sipped the nectar from the flowers, but they brought nothing home.

After the sons came, there were more daughters. But these daughters were not like the little workers that had taken care of the family all summer. They were big and beautiful, bigger than the worker daughters, bigger than the sons, as big as Mother Bomba herself. They were the young queens. Their coming meant that summer was nearly over.

The last days of summer were very happy ones. The little worker sisters went out every day to find nectar. They kept the honey-pot as full as ever.

But there was not much work to be done now in the bumblebee home. Most

of the babies were grown, and they flew out and sipped the sweets of the flowers for themselves.

The brothers and the young queen sisters feasted and played together. They filled the gardens and meadows with their humming. Then one by one, the young queens drank as much honey as they could, and flew away, as Bomba had done last year, to find homes for themselves.

Bomba was growing old now. Her wings were torn and ragged. Her work was done. She could no longer lay eggs. All her children were grown. Many of them had flown away and would never come back.

When the days grew cool, Bomba and her worker daughters used to sit together on the empty cells of their old home. They moved about slowly, as if they were very tired. They ate the honey that was left in the honey-pot

and in the old cells. If a warm day came, some of them flew out to find a late flower from which to sip nectar.

At last the honey was all gone. There were no more blossoms in field or garden or along the roadside. Bomba did not mind. It was growing cooler. She was very sleepy. One frosty night she fell asleep. But she did not wake up the next morning. Indeed, Bomba never waked again.

But by that time Bomba's young queen daughters were safe and snug in their winter homes. Next spring they would come out as Bomba had done this year. They would make homes, as Bomba had done.

Next summer Bomba's granddaughters would buzz to and fro with loads of honey and pollen for baby sisters and brothers in a dark nest just like the one Bomba had made.

Raccoons Wild and Tame

In the finest tree in all the woods lived a raccoon family. At least it seemed to them the finest tree when they chose it, and it would certainly have been hard to find one to suit them any better.

The tree was tall; indeed it stood above all the trees in the woods. And it had a hollow branch so high up that no other tree cast a shadow on it. Raccoons like to sun themselves, so Father and Mother Raccoon decided that the hollow place in the top of this high tree was just the place for a home.

Best of all, this tree was on the edge of the woods, and there was a little pond in the grassy marshland that bordered the woods. Raccoons sleep in the tree tops, but they hunt on the ground and

in the water. So this also pleased the raccoon family. The pond was full of frogs, and if a raccoon can get plenty of frogs, he will never go hungry.

These raccoons were handsome animals. Their backs were covered with long thick fur, gray-brown tinged with a little yellow, and their legs and the underneath part of their bodies ~~were~~ was grayish white.

Their tails were nearly a foot long, big and bushy. On their tails were several rings of different colored fur, a band of black, then a band of gray, then another band of black and another band of gray and so on to the very tip. It must be the fashion for raccoons to wear their rings on their tails instead of on their fingers, for that is exactly what they all do.

To look at the raccoon family, you might have thought they were all going to a masquerade party, for they had

what looked like little black masks over their eyes. But the black on their cheeks and around their eyes was not really a mask to keep others from finding out who they were. It was a patch of black fur that they wore all the time.

And they were not going to a masquerade party at all. They were really going to the swamp and to the pond to hunt for their suppers. Every night after dark they crept down from their tree, and ran along the paths the cattle had made to the water. When they reached the pond, they walked quietly around the edge hunting for frogs.

The first place the old raccoons took their babies when the little ones were old enough to leave the nest, was down to that frog pond. It was a dark night, but that did not matter. Raccoons can see in the dark as well as cats can. It was, indeed, no trouble at all for Mother Raccoon to catch frogs in the dark.

She did not find them by looking for them, but by feeling for them.

It must have seemed very wonderful to the little ones when Mother Raccoon put her hand down into the dark water and pulled out a nice fat frog. She did not even have to peer down into the water to see where the frog was. It is not often that a frog can hide in the mud so well that a raccoon's finger tips cannot find it.

Mother Raccoon pulled out the frog, all covered with mud, and then, before a baby raccoon could reach for it, she put it back into the water again. But she was not letting it go, she was only washing it. Raccoons are very clean animals, and if they can, they always wash their food in clean water before beginning to eat it.

It was not long till the little raccoons could catch frogs just as well as their father and mother. They also splashed their frogs up and down in the water, just as their parents did, till all the mud was washed off.

The raccoons caught fish, too, but not very often. They could not dive into deep water, but they could lie quiet on the shore, waiting till a fish might come near enough for them to snatch it. If a fish floated up into a shallow pool near shore, out would go a raccoon's hand, quick as a wink, and the

five sharp claws took the fish before it could swim out of reach.

Sometimes the raccoons turned over stones near the bank to find crayfish. Once in a while a little snake wriggled close, or a lizard came within reach of the snatching little hands. Then there would be snake or lizard meat for supper instead of frog meat. Once Father Raccoon caught a duck that swam up to the shore where he lay hidden behind the reeds. And there were always beetles and bugs to be pounced upon if nothing bigger came near.

But August was the time for feasting. Mother Raccoon found a big cornfield, with the ears tender and full of milky kernels. Then it seemed that the little family tried to eat all the corn at once.

They pulled down dozens of big ears, tearing the husks partly off of them and tasting the sweet, tender grains. But the greedy little animals could not eat

nearly all the corn they broke off. They were like children who take more pudding on their plates than they can eat, and so have to leave half of it.

But the raccoons had to pay for their greediness. Indeed, that feast brought about the end of Big Brother, the largest of the raccoon children. When the farmer saw his corn stripped from the stalks and scattered over the ground,

he knew who had been in the field, so he invited some of his friends to come and go raccoon hunting with him. They brought three big dogs with them, besides guns and axes and torches. It was after dark when they started out on the hunt.

That day the raccoons had not gone back to their home in the hollow tree to sleep. Their woods were a long way from the cornfield, so they spent the day in some trees that were nearer by.

So, just before daylight that day each of the raccoons had found a place in which to sleep till it was dark again.

Father Raccoon had climbed to the top of a big hemlock tree, and curled himself about the trunk, resting on the thick limbs that grew all about it. Mother Raccoon had found a hollow tree, and the smaller children had curled up with her. Big Brother had stretched himself on the highest limb of still another tree.

In the evening all the hungry little animals started back to the cornfield for another feast. Big Brother heard the hounds behind him before he had reached the rest of the family. He knew he could not get away on the ground, because the dogs could run much faster than he. His best chance was to get into the woods and climb a tree.

But Big Brother had left the woods behind him, and there was not a tree near enough for him to reach. He lumbered along as fast as he could, running like a clumsy little bear, and looking for any sort of tree. At last he saw one. It was not very big, but it was the only one near by.

The frightened little animal scrambled up into its branches, but he was too late. The dogs were close behind him. They gathered round the tree and bayed loudly, their heads up in the air. Then

they stood on their hind legs and put their forepaws up on the tree trunk, trying to reach the little raccoon.

Big Brother shivered and crouched among the branches, trying to hide. It was dark, and he thought maybe the dogs would not see him and would go away. But his trying to hide did no good. Up came the hunters with torches in their hands. The lights blazed up and showed the frightened animal's little eyes, shining like coals of fire among the leaves on the tree. In just a few minutes the hunters had the tree cut down.

The poor little raccoon jumped as the tree fell, but the dogs were on him before he could even get started. All he could do was to sit back and try to bite and scratch the dogs. Father Raccoon might have beaten the dogs off, for he was a very good fighter, but Big Brother was still very young and did not

know much about protecting himself. The dogs were too much for him, and the raccoon family never saw Big Brother again.

The other raccoons managed to keep out of the way of the dogs, and all that fall they feasted and grew fat. Almost every night they had a feast as good as a party, with corn and wild grapes, frogs and fish, berries and beetles, and all the other things that hungry raccoons like to eat. By winter time they were all very fat and their fur had grown long and thick.

When cold weather came, the family curled up together in their snug, hollow branch and slept a great deal. When they wrapped their long, bushy tails about them and snuggled close together, it was very cozy in the little home. It was only on the warmest winter days that they went outside. Then as soon as the air grew colder they climbed back

into their home in the tree top and went to sleep again.

In the spring the raccoon family broke up. The four children found mates, and other hollow trees. They went to housekeeping and had families of their own. Mother and Father Raccoon stayed in the old home in the oak tree, and in April there were five new babies.

It was two months before the little ones were big enough to creep out of the nest. Then they began to come out on warm days and sun themselves on the high branches of the oak tree. But they were timid little creatures, and they ran back into the hollow whenever they heard any strange noise. If Mother Raccoon stayed away too long, they cried for her almost as human babies cry.

Then a terrible thing happened. Old Uncle Jim's hound dogs caught Mother Raccoon, just as she was leading the babies down to the pond for their first

frog hunt. Four of the little animals were killed, too. But Uncle Jim found one of them still clinging to the tree, and he kept the dogs from killing it.

Uncle Jim was an old negro who sometimes worked in the garden for Walter's father, and he gave the baby raccoon to Walter for a pet.

At first Walter thought he would name his pet Jim after the old man who gave the pet to him. But after he had had him for a little while, the little ani-

mal poked and pried and peeped into so many things that Walter's mother said he ought to be named Meddlesome Mattie. So they called him Mat for short.

When Mat was tied up, his little forepaws were always feeling everything on the ground about him, poking into holes, turning over stones, and prying under sticks. Of course, poking and prying and turning over sticks and stones are the ways that raccoons find their food, but Walter did not think of that. He thought Mat was just full of curiosity.

When Walter's father let the little raccoon climb up into his lap, the curious little animal would feel in every pocket of his clothes to see what he could find. Mat liked to find a piece of candy there as much as did Walter himself.

Once somebody left the pantry window open, and Mat slipped in when no

one was looking. Then what a wonderful time he did have! It was even better than getting into a cornfield! He pulled out bottle corks, lifted the lids of boxes, and opened jars and pails.

He dipped into the preserves, drank the milk, stole the cookies, smeared himself with honey, and even scooped up handfuls of lard and butter. No matter

how high a pantry shelf might be, Mat always managed to get to it, for he could climb as well as a cat.

After that Mother said Mat would have to be chained if Walter wanted to keep him. So Father got a long chain and fastened one end of it to a collar around the raccoon's neck, and the other end to a post, and there Mat had to stay all day.

Walter used to put his pet's food in a dish near by, and then stand and watch him eat, for it was a funny sight. If there was any meat in the dish, Mat would never eat it till he had washed it, just as his mother used to wash the frogs she caught in the pond.

When the meat was washed enough to suit the little raccoon, he sat down, holding it in his hind paws, and tearing off bits of it with his hands and teeth. When there was a potato, he peeled it, and broke off pieces of it with his hands,

and put them into his mouth. He liked corn bread, and ate it in the same way.

The chickens used to watch their chance to snatch bits of food that Mat dropped, then they ran away and ate the food in safety out of his reach. But Mat did not seem to notice them, no matter how much they squawked and ran. By and by they stopped being afraid of him, and pecked around him

as though he had not been there at all.

Now that was just what that cunning little animal had been waiting for. As soon as the chickens stopped noticing him, he began to notice them. One day he reached out with his little hand and grabbed a young pullet that came too close. Then he caught a fat little rooster. Soon he had killed three or four of the chickens, and was feasting on the parts of them that he liked best.

That was too much. Mother said that the raccoon must be killed, but Walter begged so hard for his pet's life that Father took the little scamp out into the woods back of the farm and turned him loose.

It happened that Grandmother was coming the next day for a visit. The big south bedroom with the open fireplace had to be made ready, for Grandmother must have a sunny, warm room. It looked very clean and cozy after

Mother had swept and dusted it and put a fresh white spread on the bed and a clean cover on the table. Then she shut the windows, for it was raining, and she did not want the room to get damp.

As soon as Grandmother came, Mother and Walter went up to her room with her. When they opened the door, such a sight as they saw! All over the pretty blue rug, all over the lace cover on the table, all over the clean white bedspread, were little black footprints. It looked as though a bare-footed dwarf had climbed out of the coal hod and walked over everything in the room.

Then Mother noticed that the bed covers were humped up near the head of the bed. She ran to the bed and threw back the cover, and there, curled up on the clean sheets, was a very wet and dirty raccoon.

Mat had not liked the cold rainy

woods, and he had found his way back home. The windows were all shut, but he had found a way in just the same. He had, in fact, climbed down the chimney, like a tiny Santa Claus, tracked wet soot all over the tidy, clean room, and cuddled down in the bed to get dry and warm.

This time Father took the raccoon a long way off and left him on a big oak limb. Whether Mat could not find his way back, or whether he liked the woods that day because it was warm and sunny, nobody knew, but he did not come back, and Walter never saw him again.

Sparrow Cousins

Nearly everybody knows at least one or two kinds of sparrows, but not many people know all the kinds. That is not strange, though, for there are so many kinds of these little birds that it would take almost a whole book to tell about them all. All the sparrows belong to the same big family of birds, so we often say that they are cousins to one another.

Many of the sparrow cousins are shy little strangers who always stay in fields and marshes far away from houses and gardens. Some of them, though, friendly little creatures, nest in our rose bushes and sing in our apple trees. These you will like more and more as you come to know them.

One of the friendly sparrow cousins

is the chipping sparrow. For short he is sometimes called just Chippy. Some day you may find the neat round nest of one of these birds in the Virginia creeper vine on the porch, in the honeysuckle vine, or in the lilac or rose bush in the front yard.

His nest is a tidy little thing, made of the finest roots and grasses all woven together into a shallow little bowl and neatly lined with horsehair. It is set carelessly among the twigs, and is not

tied on safely at all. A strong wind or heavy rain storm often sends it tumbling to the ground.

If you find such a nest, you may be almost sure that it belongs to a chipping sparrow. And, if it holds some pale blue eggs, each having purple spots at one end, you may be quite sure that you have found a chippy's home.

Chippy's nest is hard to find, and, hunt as you will, you may never find one at all. But even though you do not find the nest, you are almost sure to hear Chippy himself at some time or other. You may, of course, see him, too, but you are likely to hear him long before you see him, for he keeps himself hidden away all day long. He hides from view in the tops of the fruit trees most of the time. There he sits and sings a shrill little song. Morning and evening, when most other birds sing, Chippy sings with them. He also sings in the

middle of the day when the hot sun blazes down.

If some day you hear a shrill "Chip! Chip!" that seems to come from somewhere on the lawn or even from the front porch, you may be sure that Chippy is calling. Then, if you slyly peep out, you may see him, and almost surely you will see Mrs. Chippy too. And you may see some of the Chippy children as well, for it is likely that the father and mother birds are near at hand teaching their babies to fly.

Father and Mother Chippy are brown, much like English sparrows, but they are not nearly so large. Each wears a chestnut colored cap, and each has a gray stripe over the eyes. And both are as trim and tidy as can be.

The baby Chippies are funny little birds. They have almost no tails at all, and their wings are very stumpy. That is because their feathers are not yet full

grown. But the funniest thing about them is their big yellow mouths that turn down at the corners so that the baby Chippies look like cross children.

There never were such children as the Chippies for getting into the wrong place. If there is a cat on one side of a fence, the little Chippies are almost sure to fly down on that side. Or if a horse or automobile is coming, one of the babies is quite likely to be right down in the middle of the road.

Then the poor mother and father cry, "Chip! Chip! Chip!" and fly about as though they were crazy with fright. And the baby flutters those stumpy wings of his and cries back, "Chip! Chip! Chip!" Then, just as you are sure that the cat will get him, or that the horse will step on him, he spreads his wings and flies a few feet out of harm's way.

When you know how young those baby Chippies are when they start to fly, you do not wonder that they cannot take better care of themselves. Only eight days after the little birds are hatched they fly out of the nest.

During the eight days that the baby Chippies are in the nest, the mother and father birds are just as busy as can be. There are usually four babies, and they all have their big mouths open almost all the time, crying loudly for food. It takes a great many seeds,

spiders, potato beetles, and other insects to feed the hungry little things.

One day a man who was watching a chipping sparrow saw it carry fifty caterpillars to its young ones in twelve hours. When you stop to think how much the little Chippies eat, you do not wonder that they are big enough to fly when they are only eight days old.

Even after the little birds leave the nest, they tag along after their parents and tease to be fed, like hungry children. At such times they droop their wings and look almost sick. Then, too, they cry so loudly for food that Father Chippy or Mother Chippy just has to put something into their mouths to get them to stop crying.

You would think that one family of such troublesome children would be all that the two grown-up Chippies would want to take care of. But no, indeed! As soon as the first brood are old enough

to look after themselves, Mother Chippy begins to lay eggs again. Soon she has another family of hungry little sparrows to care for and to feed.

Even though Chippies are lazy cry-babies when they are little, they all become hard-working mother and father birds when they grow up. And nobody that I know ever saw even one grown-up chipping sparrow that was not pretty and neat and sweet-tempered.

Mr. and Mrs. Chippy and their family are among our very best sparrow friends, to be sure, but they have some little feathered cousins who are even more friendly. They are the pretty little song sparrows that we can hear singing both in winter and in summer.

The song sparrows stay even in the northern part of our country all the year round. In this way they are quite different from the chipping sparrows. Chippies always go south in the fall

when the days grow shorter and colder, and there they stay until spring brings warm weather, back to the North again. But the little song sparrows never take a trip at all. They stay in the North all the year, no matter how cold the winter or how sharp the winds.

When the ground is frozen or covered with snow, the little song sparrows have a hard time to find enough food. Some winter days they seem unable to find any food at all. Somehow, though, they do keep alive during the cold weather. They eat seeds from the weeds and grasses, and berries from the Virginia creeper and the elder bushes. Now and then they find a beetle or a bug that has not hidden itself safely away.

It is also hard for the brave little sparrows to keep warm during the icy winter weather. Where the sparrows hide from the winter storms I do not know, but I think it must be under

tangles of vines, among the thick dry marsh grasses, in evergreen shrubs or trees, and under old rail fences.

In bright summer weather the song sparrows seem to like best of all those marshy meadows where tiny streams ripple and sparkle in the sunshine. In such a place you can nearly always find these cheerful little birds. Often, indeed, they come up into the trees and bushes near our homes or visit the barnyards on a hunt for hayseed. They hunt for food that lies upon the ground, and as they search they run through the grass and among the weeds like busy little field mice.

When you walk along a quiet country road, you will be almost sure to see a song sparrow half hidden among the bushes that grow in the corners of the old rail fences. Even in city parks you may often see one flitting about among the clusters of low shrubs. At first sight

you may think the bird you see is only an English sparrow, because it is of about that size. But if there is a black spot at the center of its brownish-colored breast, and if its cheeks are streaked with brown, then you may know that you are really looking at a song sparrow.

Often you cannot get close enough to the song sparrow to see its breast at all. But whether or not you do, there is a way of knowing this bird. When

the song sparrow flies, it nearly always darts downward into the leaves and brush beneath its resting place. It pumps its tail up and down as it flits along.

But you must be on the watch for this little feathered friend as it flits from one spot to another. If it once alights among the dead leaves and the tangled dry grass, you will surely miss seeing it, for its color is just about that of the weeds and field trash among which it hides. You may see a song sparrow there, of course, but if you do you will have only a peep at him as he scuttles out of sight in his funny mouselike way.

You are always likely to hear the song sparrow even before you see him. Almost every month in the year you may hear him singing his pretty song as he flits about among the low trees. First he sings three high, sweet notes, then there is a ripple of tune that tumbles

out of his throat as the water of a little brook falls over the pebbles. When the song sparrow sings this song, some people think he says, "Maid, maid, maid, hang on your teakettle, teakettle, teakettle." He may not be saying just that, but whatever he says it is a sweet and merry song. I hope you may hear it sometime.

Late in April or early in May the song sparrows begin to build their nests. They put them in all sorts of places, but never very high from the ground. They may build their nests on the ground in the middle of a meadow or on a tuft of grass in a swamp, especially where there are shrubs or small trees. Often they build them in low bushes. Sometimes you may find a nest in an old tin can, in a hollow tree stump, or under a brush heap at the edge of a wood.

The nests of song sparrows do not all look alike. Some of them look like

deep cups made of grass, leaves, bark, and small roots, and have hair linings. Others are flat, and are made only of grass.

Even the eggs of the song sparrows are not always alike. Some are larger than others, but none of them is ever so much as an inch in length. They all have reddish brown or lilac colored spots on them, most of which are in a ring around the large end of the egg. Sometimes the rest of the egg is white, and sometimes it is a bluish or greenish color. The spots are often so big and blotchy that they nearly cover the end of the shell. Most sparrows raise a family of four or five babies at a time.

As soon as the little song sparrows can look out for themselves, the mother bird begins to lay more eggs. Often one father and one mother bird will raise three broods of little song sparrows in one summer, and sometimes

they may raise even four broods. And that is something for us to be pleased about, for we cannot have too many song sparrows.

The chippy and the song sparrow are the friendliest of all the big family of sparrow cousins, but there are many other sparrows that are as pretty as they, and some that sing just as sweetly. Indeed, there are more than thirty other kinds of sparrows. Many kinds are not often seen, though, for they build their homes in lonely fields and swamps. There they stay most of the time, hidden in the long grass and weeds near the ground.

Even though we do not often see these timid birds, all of them do a great deal of good in the world. They eat thousands of weed seeds and beetles. If they did not do that, the weeds and insects would hurt the farmers' crops. All sparrows have stout bills, broad

near the head and pointed at the tip. With these bills they peck seeds from the ground or from the stems of weeds, and crack the hard husks of the seeds just as a nutcracker cracks nuts.

But there is one of the sparrow cousins who is often rather noisy and sometimes quarrelsome. And that is too bad, because he is the one that we see more often than any other. He is the English sparrow. As his name tells us, the first English sparrows in this country came from England. There he is called the house sparrow, because he lives near houses and barns.

Seventy-five years ago some man brought a few English sparrows to this country and let them loose in the city where he lived. Why he did it we do not know. Perhaps he did not know how many useful, tidy sparrows we had of our own. Perhaps he thought that our little country sparrows would

not be happy in the big city. Or he may have thought that city trees ought to have some birds about to pick caterpillars off their leaves.

The sparrows seemed to find their new home a very good place in which to live. They made nests in porches and gutter pipes, and there they raised even more families in a year than the song sparrows do. They ate canker worms from the elm trees, grasshoppers and cutworms from the grass, and May beetles from under the street lights. They ate crumbs, that children threw out, or oats that dropped from the horses' nose bags.

After a while there were a great many English sparrows in that city. They often quarreled and fought among themselves. Perhaps that was because they were crowded, and there was hardly enough room to build their nests, or enough food for them all. So, as time went on, many of them flew away to other cities and towns. Some of them stopped in the country to build their homes near farmhouses. It is really a pity that the English sparrows did not stay in the city, for not many other birds are willing to live where there are so many people and so few trees, and there are a great many harmful insects to be destroyed in the city as well as on farms.

As the years passed those birds that stayed in the city found it harder and harder to live there. English sparrows like to build their nests in the gutters and under the eaves of houses. But

by and by people in big cities stopped building so many houses with eaves and gutters. Instead of houses there were great buildings, each many stories high, and each having room enough for hundreds of people to live in. But in these great buildings there was almost no place for the sparrows to build their nests.

English sparrows used to like to eat the oats that horses had scattered and wasted in the streets. But before many years had passed they could not do that either. Instead of horses feeding from nose bags beside the curb, automobiles were giving off gas while their owners searched for space to park.

So more and more of the English sparrows have had to leave the cities. They have moved to places where they could find more shelter for their nests, and where food was easier to get. Now they are to be found in almost every

part of the United States where people are living.

English sparrows will not live in the woods or the mountains, but wherever there are houses and barns you are almost sure to find English sparrows. They are house sparrows in our country, just as they have always been in England.

Vesper Sparrow

Upon a pasture stone,
Against the fading west,
A small bird sings alone,
Then dives into its nest.

—EDITH M. THOMAS

Water Babies

Beechwood Pond was as pretty a place for a home as any water baby could want. The sloping hillsides about its banks were shaded by great oak trees and by the beautiful silver gray beeches that gave the pond its name.

Even so, the pond was a bright and sunny spot. For the trees did not grow near enough to cast their shadows across the pond. And none of the plants that grew near its banks were taller than alder bushes. At one end of the pond was a big mass of cat-tails, growing half in the water and half out on the marshy banks.

Early in spring the skunk cabbage made bright green patches on the dark swampy ground. Then came yellow

marsh marigolds and blue flags, and by and by pink wild roses. Late in summer there were red cardinal flowers, and blue steeple bush, and crimson joe-pye weed.

The water babies, though, did not know anything about the trees on the hillsides or the flowers in the marsh. Those were for winged things to enjoy, birds, and butterflies, and the shining green and blue dragon flies that flashed above the pond, their wings gleaming like wee rainbows as they flew about in the sunshine.

The water babies had no wings. They crawled about on the bottom of the pond or climbed the weeds and grass stems that grew under the water. Sometimes they just swam to and fro.

Such queer babies as there were in that pond! Some of the queerest of them all were the toad tadpoles. Hundreds of those squirming creatures were

swimming about there. They had funny round black heads and short black tails. As they pushed themselves through the water by their queer, wriggling tails, they looked like dancing black commas.

Perhaps a better name for the little black tadpoles would be wiggle-tails. But they cannot have that name, because it already belongs to some other water babies. It is the name of the wee, wriggling mosquito babies.

Many mosquito babies lived in Beechwood Pond. They had hatched from the eggs laid there by their mothers. These eggs had been glued together in tiny rafts that floated on top of the water till the babies hatched out.

As soon as the baby wrigglers were hatched, they dived down into the pond. There they swam about, coming to the top only now and then to get their breath. They stayed in the pond until they were full-grown wiggle-tails. Then they wriggled to the top of the water for the last time, crawled out of their baby skins, and flew away. They had become mosquitoes like their mothers.

Almost everybody knows about tadpoles, and most people know about wiggle-tails, but not many of us know about the other queer babies that live in such places as Beechwood Pond.

Down on the bottom of the pond lived the skimmer babies. Skimmers really

belong to the dragon fly family. But there are hundreds and hundreds of different kinds of dragon flies, and the skimmers get that name from what they do after they grow up. They go skimming over the pond just touching the surface. Their green and blue wings flash in the sunlight.

But by looking at the skimmer babies crawling about with their noses in the mud, you could never guess how pretty and gay they would be later on. They did not look the least bit pretty. The skimmer babies' bodies were gawky, dull colored and slow moving. They were covered with hairs, too.

Indeed, they looked like short-legged grasshoppers, but their mouths were bigger than that of any grasshopper you have ever seen. And even though there was a whole pond full of water about them, they looked as though they never did take a bath, for they always

had bits of dirt and trash sticking to them.

Some people say that the skimmers let the dirt stick to them on purpose, so that other creatures cannot see them as they lie amidst the mud and sticks and weeds at the bottom of the pond. Then, too, being dirty and looking like the trash in the pond helped the skimmers in another way. It helped them to get their food.

The slow little skimmers could not move fast enough to swim after other water babies that they might like to eat. So they had to lie very still and wait for the other water babies to come to them. Of course, if the other water babies could see the skimmers, they would not come near. But the skimmers looked so much like dirt and sticks, and they were so quiet, that the water babies came straight to the place where the skimmers lay, without ever seeing

them. Then the skimmers opened their large mouths and swallowed the water babies for their dinner.

The skimmer children in Beechwood Pond ate a great many of the mosquito children. For the wiggle-tails did not know any better than to get in their way. You see the mother mosquitoes could not tell their babies about the skimmers.

The mother mosquitoes lived outside of the pond, and the babies lived inside, so the little wiggle-tails had to look out for themselves the best way they could. Nor could the big brother wiggle-tails tell their little brothers and sisters about the skimmers, because the wiggle-tails did not know about them until they were already in a skimmer's mouth. Then it was too late to warn the other wiggle-tails.

Beechwood Pond was also the home of many darner babies. Darners as

well as skimmers belong to the dragon fly family. When they are grown a great many people call them devil's darning needles because they have long, slender bodies. Some people are afraid of their sting, but the fact is that they have none. They are as harmless as they are beautiful.

Those darner babies ate just about as many wiggle-tails as did the skimmer babies. The darners looked somewhat like the skimmers, too. When the darner babies were very young, they were brown, and had white crosses on their heads. By and by they got new coats of black and white stripes. Later they changed again, this time to bright green with brown spots.

When the darners got these fine, gay clothes, they no longer lay on the trashy, muddy bottom of the pond. No, indeed, they climbed up on the stems of reeds and water weeds. Then they were

almost as hard to see as the dirty little skimmers, for their green and brown coats looked just like the green and brown of the plants upon which they climbed.

So the darners often crept up on the wiggle-tails before the little wrigglers knew they were about, and snip, snap, the wiggle-tails were swallowed before they knew what had happened. Nor were the darners satisfied just to creep up on the wrigglers. Sometimes they swam after them. The wiggle-tails had a hard time, indeed, for there were skimmers in the bottom of the pond and darners everywhere else.

Many damsel babies also lived in Beechwood Pond. They, too, climbed on the reeds and swam about whenever they wanted to do so. And they were as hard to see as were the other water babies. Not only were they brown like the stems upon which they climbed, but

their bodies were shaped so much like sticks that they looked like stems themselves. They, also, ate wiggle-tails.

With all the other water babies wanting them for dinner, the wiggle-tails had a poor chance to grow up. But there were so many, many wiggle-tails that it is a good thing for you and me that the other water babies were after them. Think of the many, many mosquitoes so many wiggle-tails would have made if all of them had lived. We wish that none of them had ever grown up.

So the water babies lived together in the pond and ate what they could get. And they even ate one another whenever they got a chance. They also ate all kinds of other small insects that lived in the pond.

Of course, with all this eating, those water babies who were not themselves eaten up grew quickly. In the beginning they were very tiny indeed. But

after they had lived in Beechwood Pond for a season, they were as big as they would ever be.

One warm, clear day in the beginning of summer, so early that the sun was not yet up, there was a stirring in Beechwood Pond. Down in the bottom of the pond the skimmers began to move. They crept along the bottom of the pond until they reached its sides. Then they crawled up the sides, and on up to the top of the water. Then for the first time in their lives they pulled their bodies out of the water and up onto the banks and the reeds that grew outside the water.

What happened next was like what happened to Cinderella. There was no fairy godmother to wave her wand and change the dirty old dresses to clothes fit for a princess. There were only the summer and the sunshine. But the time had come for them to change from

their plain dresses, and that is what they did.

Split, went the skins down the skimmers' backs, and out crawled the skimmers, wearing their new clothes. At first, though, the new skins were not very different from the old ones. The skimmers still looked a great deal like the muddy bank. Their bodies were weak and soft and limp.

But on each skimmer's back was some-

thing water babies never have. There were four folded wings. At first the wings were small and thick, but before long, they unfolded, and then they grew very fast. Soon they were spread out in the sunshine, thin as tissue paper, clear as glass and showing rainbow tints where the sun shone upon them.

While the wings were growing larger, the soft, thick bodies were changing too. They grew longer and slimmer. They took on lovely colors. Some were brown and yellow. Some were dark shining blue. Some were a lovely green.

The newly dressed skimmers rested a little while till the clear shining wings were quite stiff. Then, one after another, they sprang up into the air, into the sunshine, and out over the pond.

In zigzag lines, here and there, they skimmed over the top of the smooth water. Sometimes they dipped almost close enough to touch the water. At

other times they stopped still above it, rested on their wings for just a second, and then flew off again.

The noonday sun shone down. The empty skins on the banks and on the water weeds were dry and hard. But that made no difference. The water babies had no use for their old skins. They were real skimmers now.

In just the same way the darners and the damsel babies came up out of the water and changed into land insects. Most of them climbed up on the reeds and grasses to wait for their old skins to split. Then out they crept, and sat in the sun till the new skins dried, just as the skimmers had done.

When the darners were grown, they looked very much like the skimmers, only they were bigger. Their bodies were shining, too, and of different colors, but most of them were green.

The damsel flies were different from

the other insects. The skimmers and darners held their wings straight out when they rested for a minute on a leaf or stem. But the damsel flies held their wings straight up above their bodies. They were slimmer, too, and not so strong as the others.

There were many skimmers and darners and damsel flies about Beechwood Pond after the summer days grew long and hot. But not all of them flew in the same places. Down near the pond, hardly an inch above the water, flew the smallest damsel flies; just a little higher were the larger flies.

Part of the time the damsel flies were catching mosquitoes, gnats, and small flies. Part of the time they were laying their eggs. When the damsel flies laid their eggs, they rested for a minute on the water plants. Their long, slender bodies bent down to the stems of the plants, just under the water. Then,

with a sharp lance which they have in their bodies, they made tiny holes in the stems and laid their eggs inside.

The skimmers and darners were bolder than the damsel flies. And that is no wonder, for they were bigger, and they could fly higher and farther.

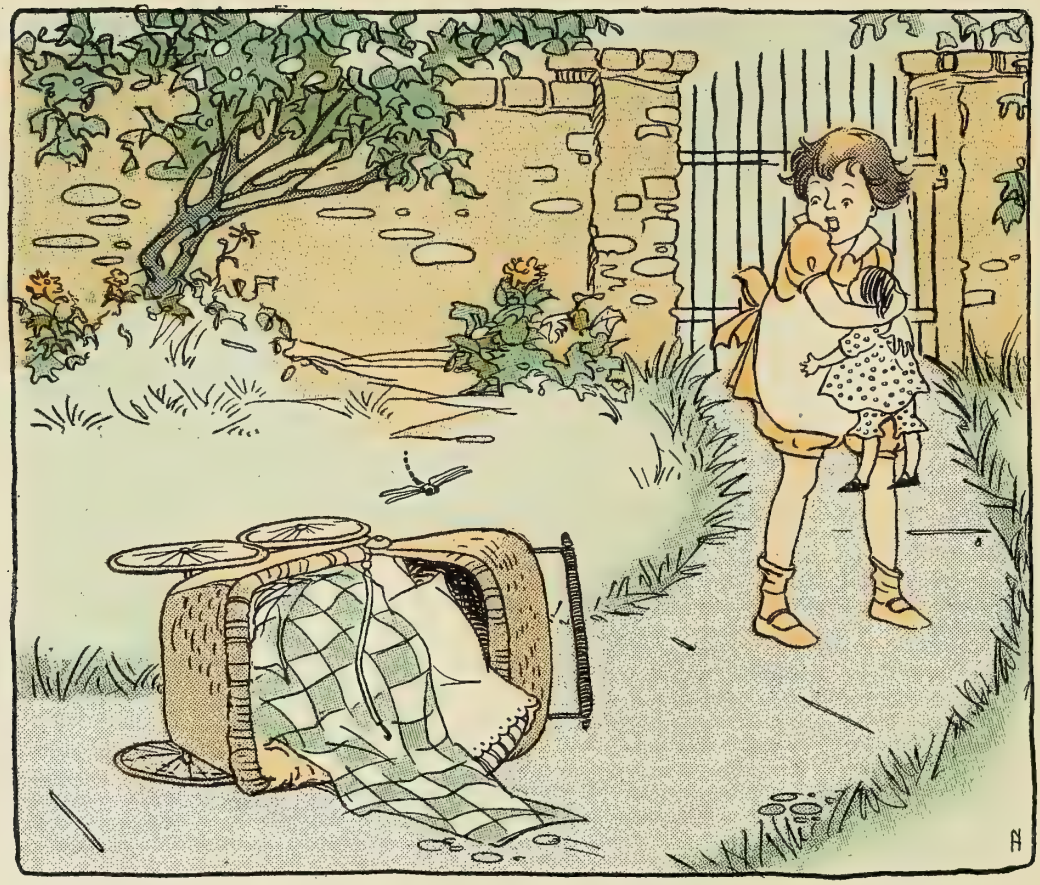
Sometimes the skimmers flew away from the pond to the fields and the orchards beyond the hill. They always came back to the pond, though, to lay their eggs. They skimmed over the pond, the tips of their bodies just touching the water, and then dropped their eggs into the pond without stopping for even a minute.

All the skimmers and damsel flies, big and little, liked best to fly in the still, hot, sunny, midday hours. But on cloudy days they sheltered themselves under the leaves of the bushes about the pond. They were so quiet they seemed to be asleep.

And not only did the skimmers hide away on cloudy days, they sheltered themselves from the wind as much as they could, too. One of the skimmer's cousins likes the wind, and flies about on windy days. It belongs to the dragon fly family too, and is called the wind sprite. When strong June breezes blow, the brown and yellow bodies of these little insects flutter up and down above the pond like those of the butterfly, or swing to and fro on the swaying reeds.

The strongest and bravest of all these grown-up water babies were the big darners. They flew early and late, even at night, and they were not afraid to fly far from home. Sometimes they hunted gnats and flies that flew among fruit trees. Sometimes they skimmed over the lawns.

Some people call the darners snake doctors, and think they can cure snakes,



or even bring dead snakes back to life. But nobody I know ever saw one of them do such things. Other people are sometimes frightened by these grown-up water babies, and tell stories about them that are not true. Some people say that the devil's darning needles might sew up your lips. Of course, that is very silly.

But mosquitoes are about the only creatures that really need to be afraid of darners and skimmers. Dragon fly is a very good name for them, for they are like the dragons of the fairy tales who devoured as many people as they could catch.

When they were water babies they ate hundreds of wiggle-tails. Then when they could fly they began eating mosquitoes. If they did not do that, think how many mosquitoes there would be to pester and bite us. Now, which do you think we should be more afraid of, dragon flies or mosquitoes?

May

Why are the bees and butterflies
  Dancing in the sun?
Violets and buttercups
  Blooming every one?

Why does Mr. Bobolink
  Seem so shocking gay?
Why does—ah! I'd half forgot!
  This is really May.

Why are all the water bugs
  Donning roller-skates?
And the solemn ladybugs
  Dozing on the gates?

Why do all the meadow brooks
  Try to run away,
As though some one were chasing
    them?
  Bless me! this is May.

—R. M. ALLEN

Flittermouse

Flittermouse was not a mouse at all, even though his name would make you think that he was. Of course you will ask, "What was he then?" Perhaps you can guess this riddle and so find out what he was.

He is dressed all in fur
From his tail to his nose;
He flies with his fingers,
And hangs by his toes.
He sleeps all day long
Without going to bed,
Holding on by his toenails,
Hanging heels over head.

If you haven't guessed the riddle, then perhaps this picture will help you. For here is a picture of Flittermouse, fingers, thumbs, toes, tail, head, body,

wings, and all. And now you have guessed it. Flittermouse was a red bat.

Flittermouse was a queer little creature. He had a funny pinched face, round ears, and a wide mouth filled with sharp teeth. His body was plump and his tail was short. His legs, too, were very short, his knees bent outward, and on each foot were five tiny toes each having a wee sharp claw.

But the queerest thing about Flittermouse was his hands. If Red Riding Hood had seen this strange little creature, I think she would have said to him, "Oh, Flittermouse, what big, BIG, BIG hands you have!" For his arms were much longer than his legs, and his fingers were even longer than his arms. His thumbs, though, were short, and each had a long sharp claw at the end of it.

Although the feet and hands of little Flittermouse looked very queer, the things he did with them were even more queer. He could not stand up straight at all, because his feet were so tiny and his knees bent outward. But he could hang by his toes, head down, and sleep for hours at a time.

Big as his hands were, he could not pick up anything with them, nor could he hold anything in them. For holding things his thumbs were of no use at

all. He could hang by his thumbs, though, but not for so long a time as by his toes. He could use the sharp claws at the ends of his thumbs to pull himself along, and that was the nearest he could come to walking.

But there was something even more interesting about Flittermouse. Between his long fingers was a very soft strong skin that joined the fingers together. It was somewhat like the skin that joins the toes of the duck, but it was much thinner. This skin not only joined Flittermouse's fingers, but it also joined his fingers to his tiny sharp toes, and it joined his toes to his tail.

Now, what do you think this skin was for? It helped this queer little creature to fly. For whenever Flittermouse stretched out his long arms and his still longer fingers, the skin between the fingers became very tight and so

made a pair of big wings. With these wings Flittermouse could fly about and dart through the air almost as well as a bird.

But Flittermouse was not a bird. Birds are dressed in feathers, and Flittermouse did not have a single feather on him. His soft body, his head, and his ears were covered with silky red-brown fur. But the wing skin had no fur on it at all except where it joined his wee legs and his stubby tail. All the rest of the wing skin was like soft brown silk.

Flittermouse was, indeed, a very good name for this silent, furry little creature. His soft fur, his round ears and his odd little face made him look a great deal like a mouse. But Flittermouse could do things that no mouse can. No one ever saw a mouse hanging by his toes sleeping in the daytime as Flittermouse did. And, of course, a mouse cannot fly.

But any mouse does things which Flittermouse never thought of doing. A mouse can scamper and run swiftly on his four little feet. He can even stand up on his hind legs and use his front legs as hands. Poor Flittermouse could not even walk on his legs.

Please do not think, as many people do, that because Flittermouse was a bat he was not clean. He was a very clean little creature. Often, as he hung by one foot, he passed the other over his shoulder to comb the fur on his head and neck. Then he hung by the other foot while he combed the other side of his head in the same way. Next, with his rough little tongue he licked his whole body as carefully as a kitten washes itself. So he kept his pretty red-brown fur soft and glossy like silk.

Late one warm August afternoon Flittermouse was fast asleep, hanging

head downward underneath a maple leaf. He had been hanging there all day long, his ten sharp toenails clutching the stem of the leaf ever so tightly. His soft brown wings were wrapped about him as though they were a tiny, wrinkled, silk shawl. They covered every part of his little body, even to the tip of his nose. Except when the wind rumpled his fur and made it lie in tiny ripples, Flittermouse looked just like a withered, red-brown leaf.

The hot August day was nearly at an end. Birds that all day long had busily hunted for flying and creeping insects were now finding resting places for themselves. As they settled down to rest among the branches, they chirped and twittered softly for a little while before they went to sleep. Perhaps the day's work had tired them out.

But, of course, not all the birds and insects were going to sleep just at this

time. When the light grew dim, little fireflies began to flit about, flashing their tiny lanterns as they went to and fro. Great swarms of gnats danced among the bushes and the trees. Hungry chimney swifts, eager for their supper, shot into the air from a tall farmhouse chimney and darted here and there among the swarms of restless insects.

Flittermouse never did get up very early. But he had been sleeping all day and he now began to rouse himself, for he knew it was time to be waking. It would soon be time for hunting his supper.

Flittermouse began to stir under the maple leaf, under which he was clinging. First of all he drew his soft wings back from his face a little, and poked out his funny little snout that looked like the nose of a wee monkey. Then, all of a sudden, he let go his hold on the maple twig. For a second he fell,

head down; then he spread his silky wings, turned a somersault in the air, and was off like a flash, high over the tree tops. Flittermouse sailed in the wind for a little while, like a ship with all its sails spread. Then by and by he spied a little brook running through a meadow. He flitted toward it, dipped down to the water, lapping it with his tongue as he flew back and forth over it time after time. He had been hot in the tree top that day, and the water cooled his thirsty throat.

Then back to the maple tree Flittermouse flew again, darting, whirling, and sweeping as he went. He was going back there to get supper. He was not satisfied with the tiny gnats that he had been catching as they flew through the air about him. He did eat some of them at times, and he ate mosquitoes, too. But he wanted something bigger when he could get it.

Suddenly there was a buzz in the top of a near-by tree. A big green June bug spread its wings and made a zooming sound as it flew bumping against first one twig and then another. Quick as a flash Flittermouse wheeled about and darted after it.

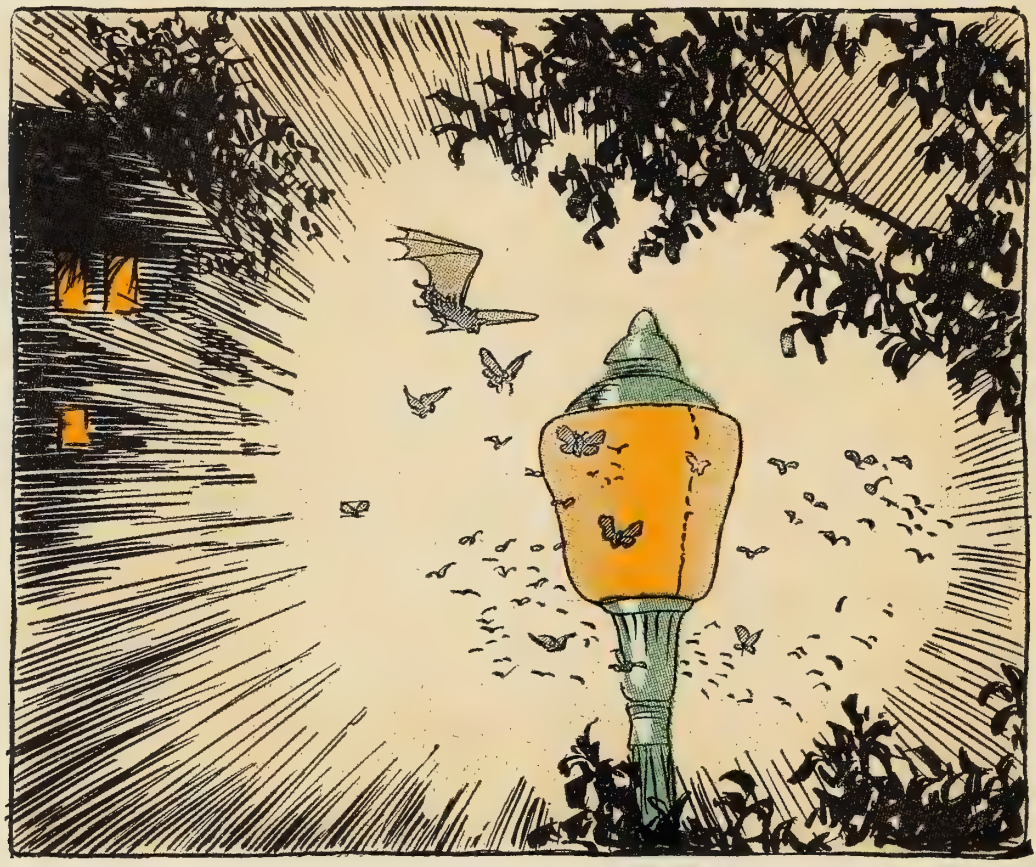
The little bat caught the June bug between his sharp teeth, and crunched through its hard wing covers. Holding the bug between his teeth, he ate it as he flew.

Flittermouse had just eaten the last bit of the June bug, when he saw a large moth flying through the branches. It was a beautiful moth whose broad brown wings were marked with rose and blue and tan. With a swoop through the leaves Flittermouse darted at the moth, his wings flapping and his mouth wide open. His teeth came together with a sharp snap, but he just missed the moth. She flitted away

through the leaves, and he darted after her, snapping his teeth again and again. But he missed her a second time.

Quick as a wink he whirled about and darted at the moth a third time. This time he was too quick for the beautiful creature. His strong sharp teeth snapped together in her soft body. Flittermouse held the moth tightly in his mouth as he flew onward, and with his sharp teeth he clipped off her beautiful wings. They floated slowly downward to the ground below, while Flittermouse flew on. Again he had a feast.

But Flittermouse had just begun his evening's hunting, for three little insects were not nearly enough food for him. Sometimes he caught as many as twenty June bugs or beetles or moths before he had all the supper he wanted.



Just at that time no more beetles or moths were in sight in the tree tops about. But Flittermouse was not unhappy about that, for he knew another place where there would be plenty of good hunting. He whirled about and flew out of the woods across the meadows, and right into the village that was close by. There he found moths, big and little, flying about the

glowing electric lights. So Flittermouse darted in and out among the swarm, snapping up first one and then another.

In this fine hunting ground Flittermouse feasted till nearly midnight. Then he flitted out of the village happy and quite content. He flew back to the woods and hunted out his maple tree again. On one of its twigs he hung himself, head downward, wrapped his wrinkled silky wings about his tiny body, and went to sleep for the rest of the night and the next day.

Flittermouse had not always looked after himself. Once he was a wee baby. With soft wings wrinkled about his tiny body, his mother had carried him with her everywhere she went, had fed him and protected him. Flittermouse was not the only bat baby in the family. He had a twin sister that was just his size. They were born late in June, after the warm summer days had come.

When the baby bats were little, their mother could not hold them in her arms, as our mothers do. Instead, she leaned over them, and wrapped her wings about them. The wee baby bats clung tight to her furry body and drank her warm milk.

Every day the mother bat stayed in the tree with her two tiny babies the whole day long. When night came, though, she always flew off to get something to eat. And since there was no one to leave the babies with, she took them with her.

The mother bat had a big pocket to carry her babies about in. The soft silky skin that stretched between her hind feet and her tail turned forward under her body and so made a pouch or pocket for her children. The little bats lay in this strange pocket and clung to their mother with their wee mouths. All the while the mother bat

darted here and there through the tree tops, chasing moths, beetles, and all the other flying things she ate for her supper.

In about two weeks the baby bats were old enough to stay at home alone. Then, each evening their mother left them clinging to the tree until she had finished her night's hunting. When the little bats were about three weeks old, the mother began to bring them small beetles and moths to eat. They opened their mouths wide, caught hold of the fluttering insects, and crunched them with their sharp teeth. Bats eat only live insects. The little bats did not like to eat a moth or beetle that had been killed before it was brought to them.

One evening a terrible thing happened to Flittermouse. It was while he was still very young. His mother had left him clinging to the trunk of a tree

waiting for her to come back. The mother bat had not been gone long when a boy climbed up into the tree. When he saw the little bat, he thought it would be a fine thing to have for a pet.

Flittermouse chattered loudly and snapped his sharp teeth at the boy when he came near. But the boy was not frightened. He knew that the bite of a bat does not cause a person to die, as some people say. But he did not want to be scratched by the sharp little teeth, so he spread out his handkerchief and picked up Flittermouse inside it.

Flittermouse's mother had just flown down to the pond for her evening drink of water. She heard her baby crying, and came back to him as fast as she could. When she reached the tree and saw the boy, she flew straight at him. She darted right at his head. She even followed him through the meadow path

as he ran toward home. At last she alighted on the boy's coat and pulled herself along by her claws until she was as near to little Flittermouse as she could get.

Now, who would keep a baby bat from its mother? Certainly this boy would not. So he ran back to the tree

where he had found the little bat and put it down there. Then the happy little mother flew to her baby and covered it with her furry body and soft spreading wings. At last little Flittermouse was safe again.

From then on the mother bat watched her babies more closely than ever. She did not have to worry about them much longer, though, for they were now growing very fast and soon they would be able to fly and to take care of themselves.

I do not know just how little Flittermouse began to fly. Perhaps one day his mother pushed him off the tree where he clung. Perhaps he himself just let go of the tree and dropped into the air. Or it may be that something tumbled him over one day and sent him falling to the ground. But if that is so, then one thing is sure: Flittermouse did not fall far. He did just what any child

does when it falls. He threw up his arms and spread out his hands as if to find something he could hold to.

When he did that the skin between his fingers spread out like a fan, and all at once he was flying without any help at all. He did not have to learn to fly. And his twin sister did not have to learn, either. Baby bats never do. When the time comes to fly they always know how.

Before long, Flittermouse and his twin sister were flying about, and when the mother bat flitted off in the evenings, they flew after her. Then, when the night's hunt was over, they came back to the home tree and hung themselves up to sleep near their mother.

So the summer days passed, and before long the weather began to grow cooler. There were not so many big moths and beetles flying about then. Also, it was harder to find any other

food to eat. So the bats had to get ready for winter. They would not mind the cold much, for their bodies were well wrapped in warm fur. But they needed food if they were to live.

Now, how do you suppose the furry little creatures could get their food? They could not store up enough to last during the cold months, for bats eat only insects that have just been caught. And, for that matter, there would soon be no moths or beetles or gnats or mosquitoes or any other flying insects at all in the chill winter air.

So, late in September, Flittermouse and his mother and his twin sister and many other red bats all started on a long journey. They left the trees and woods where they had lived all summer. Insects were getting harder and harder to find. The red bats were going to find a warm and sunny land where there were flying moths and beetles during

all the months of the cold northern winter.

During the days when the red bats were making their journey, they flew not only at night but long after sunrise as well. And they traveled along at nearly twenty miles an hour. They had to fly very, very fast, for the land where it was warm all winter long was many hundreds of miles away, and the cold winds of the northern winter would be blowing before long.

Flittermouse, who could now fly as fast as any other red bat, kept up with the others, and saw many strange places on the way. Those places interested Flittermouse, for, you must remember, he had never before been away from the woodland where he was born. On one day of the journey the red bats came to a broad sea beach of glittering white sand. Along this beach were high rocky cliffs overgrown with

bushes and filled with cracks and crevices. There Flittermouse and his friends slept one whole day hanging, heads down, amidst the tangled underbrush.

The next day the red bats flew out across the beach and along the shore of the sea. They passed cities filled with high buildings. When night came they passed other cities lighted brightly by thousands of shining electric lamps. Flittermouse remembered the lights of the little village near his old home, and thought of the fine feast of beetles that must be flying about the electric lights he now saw. But since the red bats did not stop here, Flittermouse flew onward with them.

Soon the red bats left the seashore and flew across the country, over roads and fields and woods that Flittermouse had never seen before. In these woods some moths were still flying about, for here it was warmer than in the woods

where Flittermouse grew up. There were some mosquitoes here, too, above the swampy places, so Flittermouse had a real feast that day. He filled his hungry mouth again and again before he went to sleep.

But the red bats did not stop long in these new woods. Here the weather was a little warmer, but it was not warm enough for the bats to stay long. Winter would soon come to them here, so they flew on and on, night after

night, toward a land to which winter never comes.

One morning the bats stopped in a dense wood which looked very strange to Flittermouse. He hung himself downward in a new kind of tree, a tree having big leaves and bright flowers. He felt very tired. Bright blue and green beetles such as he had never before seen buzzed about and hummed among the flowers. Big moths with brighter wings than he had ever seen fluttered through the leaves.

So, at last, the long journey was over. Flittermouse and all the other red bats had come to the sunny southern land where it is always summer. There they would stay, warm and well fed, till the coming of springtime to the northland would draw them back to their old homes there.

Field Mice and Feathered Mousers

Johnny Adams liked the old apple orchard better than any other place on the farm. The grass there was long and soft, and he liked the feel of it under his bare feet. Sometimes as he wandered about, he startled a rabbit which jumped up and scampered away from him.

Over in a far corner of the orchard were the beehives. All day long in apple-blossom time the bees hummed and buzzed among the pink and white flowers. There were birds, too, and butterflies and grasshoppers and sometimes tiny green snakes. Through the grass there were little runways, the roads of the field mice. There were

many other interesting things for a boy to find.

The old apple trees, which had been there ever since Johnny's father was a boy, were bent and broken. Some had hollows in their trunks and in their big branches. The apples that grew on them were often deformed and wormy.

It was in the weedy corners of the old orchard that the field mice made their nests. Their little roads ran here, there, and everywhere under the long

soft grass. In summer the sleek little mice had all they could eat. They ate grass blades and grass seed, and the sweet leaves and flowers of the clover. Then, too, there was always plenty of vegetables in Mr. Adams' garden just beyond the fence.

When fall came and Johnny's father cut his corn, the mice left the orchard and made homes under the tall shocks. All through harvest time they feasted on the sweet kernels of corn. Johnny sometimes found their nests when he was helping husk the corn. Then his dog chased the scampering mice across the field and caught some of them as they ran first one way and then another. But there were so many of them that nobody missed the few that were caught.

When the days grew short and cold, and snow came, there was no longer clover in the fields, or vegetables in the

garden. The corn had all been husked and stored in the corncribs. So the mice had to move again.

This time some of the sleek little mice went across the road to the new apple orchard. The bark on the trunks and roots of the young trees that grew there was tender and the mice liked it. They nibbled as much of it as they could reach. Others found their way into the granary where the oats were stored. Still others found a way into the corncribs and made nests among the ears.

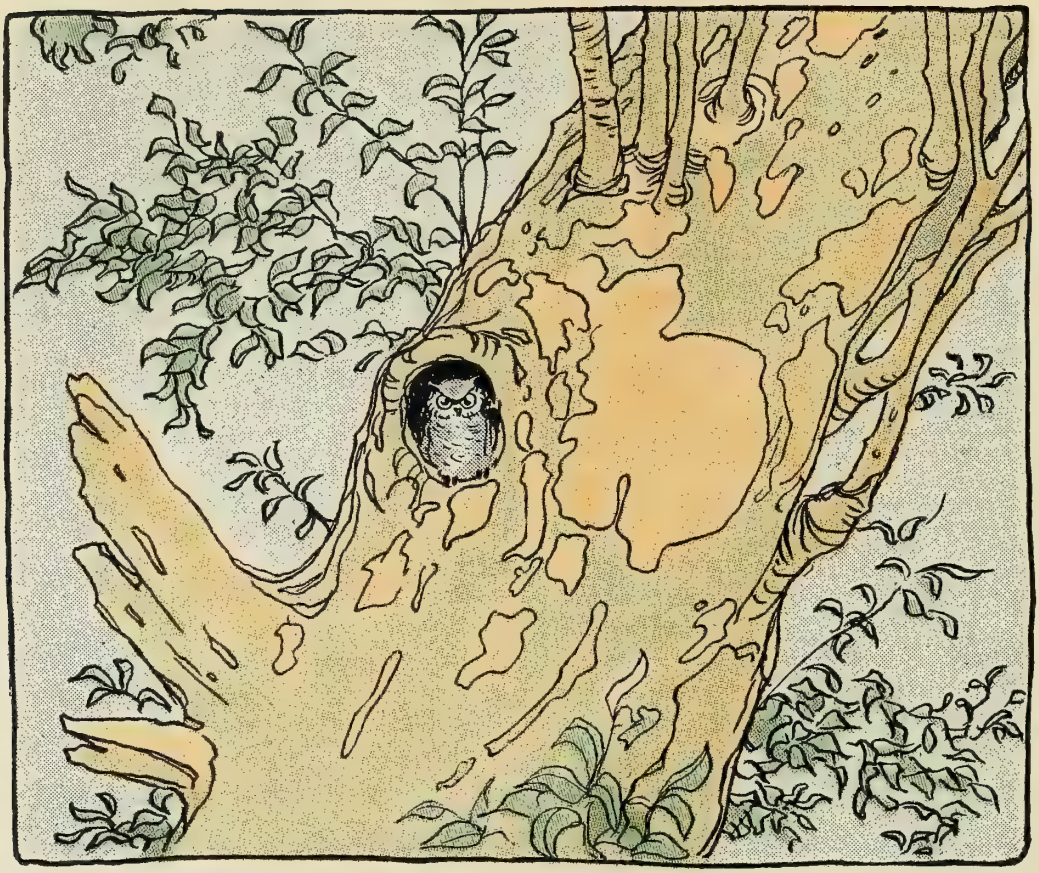
Even though it was winter, the mice feasted and grew fat. In spring when the bins were emptied and the grass in the orchard was green again, the mice moved back to their homes under the old apple trees.

One day in May, Johnny was hunting for bird nests in the old orchard. By and by the humming of the bees and the warmth of the spring sunshine

made him feel lazy and sleepy. So he lay down on the grass and went to sleep. It was nearly supper time when he awoke. Just as he opened his eyes, he thought he saw something, sitting on the edge of a hole in the apple tree just in front of him.

Johnny sat up quickly. But whatever it was that he had seen was no longer there. Without making a sound it had dropped out of sight, down into the hole. The boy sat very still. He could not hear anything moving except the buzzing bees, but in a little while the same thing, whatever it was, was up in the hole again.

This time Johnny got a good look at it. It was an owl. He had seen owls before, but never had he seen any so small as this one. It was no longer than a robin, but it had a big round head and big round eyes. On top of its head at each side was a tuft of



feathers that stood up like a cat's ear. The face was like a cat's face covered with feathers.

The bird was a little gray screech owl. One evening in early spring, almost at bedtime, Johnny had heard its call. Suddenly there had come a long wail from the orchard. It had sounded like some one crying, or a baby colt whinnying for its mother.

Johnny might have been frightened, if his father had not said, "That's a screech owl. I hope it is going to make a nest in the orchard. It would help get rid of those field mice that ruined some of my young apple trees last winter."

The little screech owl had not been thinking of mice when he gave that long, shivering call. He had seemed to be saying, "Wh-h-h-ere are you-oo-oo-oo? Who-oo-oo-oo are you-oo-oo-oo?"

But the owl could not have been saying that for he had really been singing to another little gray owl that had been right there before his eyes in the very tree in which he was sitting. He had sung his song to her, and bowed and bobbed and lifted his wings up and down, and done everything he could to make her notice him.

He had wanted her to become his mate. The other little owl must have

liked his singing, because the very next day she had gone to housekeeping with him in the old apple tree. It was she that Johnny saw sitting on the edge of the hole when he woke up from his nap.

Johnny knew better than to put his hand down inside the hole and try to lift the little owl from her nest. He knew that if he did so, she would give him a hard bite with her sharp curved beak, or scratch him with her long claws. So he lay very still in the grass. By and by the owl flapped her wings and sailed away to hunt for her supper.

Johnny noticed that the owl's wings made no noise as she flew away. That was because they were so soft and downy, and so big that she did not have to flap them fast. She was just as quiet as a cat when it moves about hunting mice or birds. She was like a tiny cat with wings, and she was off to hunt field mice.

As soon as the owl was out of sight, Johnny hurried over to the apple tree and peeped into the hole. The sun had gone down and it was nearly dark. At first he could see only a soft bunch of down at the bottom of the hole. After looking closely a moment he could see round eyes peeping out of the down, and hungry, wide-stretched beaks. He thought there were four baby owls in the hollow, but the light was so dim that he could not be sure.

There really were five little owls in the nest, if it could be called a nest. Mother Owl took good care of her babies, but nobody could say she was a good housekeeper. When she and her mate went house-hunting, they had found this hole in the apple tree. A family of squirrels had once lived in the hole. When they had moved out, they had not taken their old worn-out beds and empty nut shells with them.

The screech owls had then moved in without cleaning out a bit of the trash the squirrels had left, and had made their nest among the dirt. They had made it of some scraps of rotten wood and a few sticks and feathers.

In this rough little bed Mother Screech Owl laid five eggs. They were almost round. At first they were snowy white but soon they became as dirty as everything else in the untidy little home. By and by five cunning baby owls, all covered with soft yellowish-white down, hatched out of the eggs.

Now that the little gray father and mother had this hungry brood to feed, they caught more field mice than ever. They caught caterpillars, too, and frogs and lizards and cutworms. But most of all they caught field mice, dozens and dozens of them. Johnny's father said they were better mousers than Dick Whittington's cat had been.

Sometimes when screech owls cannot find other food for their babies, they catch birds. They seem to like English sparrows best. But there were so many field mice in the orchard that these screech owls did not need to catch birds.

The baby owls did not have what we call good table manners, but what else could be expected? Their father and mother had no better. You would think that since they had sharp bills and long claws they would cut their food up before they ate it. But no, indeed! They never cut up anything unless it was so big they couldn't get it into their mouths. They swallowed a mouse whole, ears, tail, skin, bones, and all. Then by and by they spit up the parts that were not good for food, done up in tight little round balls that looked somewhat like brown cocoons.

As the five young owls grew bigger, they took up so much space in the nest

that there was no longer room enough for their parents. So Father Owl moved out of the small, dark bedroom where he had been staying during the day, and left Mother Owl there to keep the children safe. Poor Father Owl could not find another good hole near by, so there was nothing for him to do but to roost all day in the leafiest branch he could find.

One day in June when Johnny was in the orchard, he heard such a chattering that it sounded as though all the birds that nested there were quarreling with one another. Bluebirds and sparrows, catbirds and thrushes, all were flying about a big branch of one of the trees and scolding at the tops of their voices. And there in the midst of them was the father owl, standing straight up in the apple tree, his feathers fluffed out all about his face so as almost to hide his beak.

The owl had been asleep. At least he looked as though he were fast asleep, for his eyes were shut tight. Maybe he did not hear the racket at first, because owls have a little flap that they can draw over each ear whenever they want to sleep, and so shut out the daytime noises. But there were so many birds, and they flew so

close, and scolded so loudly that he could hardly help hearing them this time.

Sometimes owls pretend to be asleep when they really are awake, and maybe the father owl was just pretending. Anyhow, he did not pay any attention at all to the scolding birds till a saucy blue jay flew at him with the noisiest scream of all. Then the owl opened his eyes, winked once or twice, and sailed softly away to find another hiding place.

Johnny thought that the father owl looked very funny when he winked. He made Johnny think of a little old man. The owl's big yellow eyes were in the very front of his head, and, unlike other birds, he had eyelashes. Most birds have no eyelashes at all.

Most birds do their winking with an inside eyelid, that moves back and forth across the eye. But the owl winked

his upper eyelid, just as people do. The feathers around his eyes were like spectacles. They made the owl look still more like a little old man.

If Johnny had seen the owl turn his head, he would have thought the bird still funnier. For an owl cannot roll its eyes to look from one side to another. It must turn its head to do that. Sometimes when an owl is watching something that is moving around it, it turns its head so far that it looks as though it would wring its own neck.

Day by day the little owls grew bigger and better able to take care of themselves. Soon real feathers took the place of the baby fuzz. They looked more like their parents every day.

It was late in July before Johnny had another sight of the owl family. This time he saw all of them together. He was late for supper, and was running through the orchard in the dusk,

when, on a limb of the apple tree just in front of him, he spied the five owl babies, all perched in a row. They had just come out of the nest for their first flying lesson.

Johnny did not see the old owls at first, but they saw him, and both of them flew at him at once. Their wings made no noise as they flew, but their sharp curved beaks snapped. Johnny did not wait to look any closer. He put his arms up over his face and ran to the house as fast as he could.

From that time, all the owl family were out in the orchard every evening. They would rest quietly in the low branches of the trees watching the ground below as a cat watches a mouse-hole. When one of the old owls saw a field mouse below him, he spread his soft wings and dropped down without a sound. Before the unlucky mouse knew what had happened, the owl had

caught it in his sharp claws and flown up again to eat it himself or feed it to one of his babies.

By August the owl children were full grown. Three of them were gray, and had black streaks through their feathers, just as the old owls had. The other two were almost red, as screech owls often are.

It was not until an evening in August, that Johnny again heard the soft little shivering call of the screech owl, "Who-oo-oo-oo-oo are you-oo-oo-oo?" The father had been too busy caring for the growing children to sing very much. Maybe it was just as well, for if he had sung, some enemy might have found his nest and stolen his babies. But the babies were grown now, and he no longer needed to be careful. Often on the warm August nights his trembling call sounded out in the orchard. Johnny wondered whether, per-

haps, some of the owl children were calling too, but he never knew.

When winter came, some of the owls went to live in the barn. It was warmer there than it was in the trees outside, and the snow and rain could not beat in. The mice were there too, eating the stored grain and scampering across the floor after nightfall.

Johnny never knew how many of the owls spent the winter in the barn, but he saw one once, sitting in the barn window in the moonlight. Sometimes, too, he found on the barn floor the little fuzzy brown balls that the owls cast aside.

As the winter went on, it was not so easy for the screech owls to find enough to eat. The mice did not run and scamper about the barn floor as they had done the year before. There were not so many of them as there had been then. Little feathered mousers had

caught a great many of them in the orchard during the summer, and they had caught a great many more in the barn during the winter. There were a few days when not enough mice came out of hiding to make a dinner for even one owl.

Johnny never knew how near the screech owls were to starving some of the days that winter. If he had known that, he might have put out some suet or raw meat for them to eat. He knew the little feathered mousers were among his father's best friends, and he learned to love their strange evening song and their funny, wise little faces.

The Smallest Bird in the World

One morning late in May, there was a sudden loud humming among the honeysuckle blossoms. It was louder than the soft sound the bees make, louder even than the buzzing of the big yellow-bodied bumble bees. It sounded like the propeller of a tiny airplane—"Zoom, zoom, zoom, zoom." And that, indeed, is exactly what it was.

This tiny airplane was not like those that sail through the air carrying people here and there. It was a wee green bird. The body of this tiny creature was no longer than your finger. His bill was nearly an inch long, straight as a needle and almost as slender. The glossy green feathers of his head and

back and wings were beautiful in the sunshine, but even more beautiful was his shining red throat. It was like a jewel, glowing red as a ruby.

The tiny bird was hanging over a honeysuckle bloom, his bill deep in the flower cup. He seemed to be standing still in the air, except for his tiny wings, which were moving so fast you could hardly see them. You could not count as fast as they moved, for they made more than a thousand beats a minute.

It was this beating of the tiny wings that made the humming sound. It was the speed of them that held the little bird in the air.

And what do you suppose this wee green bird is called? Perhaps you already know his name. But if you do not, you could almost guess it. For the humming of his little wings and the jewel red of his tiny throat give him his name. He is called a ruby-throated humming bird. He is the smallest bird in all the world.

There are many, many kinds of humming birds, and all of them are alike in many ways. All of them are tiny, all of them have shining green feathers on their bodies and wings, and all have pretty throats, like purple, green, blue, or orange jewels. Most of the humming birds live only in the hot lands far to the south of our country.

When Rubythroat darted into the

midst of the blooming honeysuckles, he had just finished a long, long journey. For the ruby-throated humming birds spend the winter in the warm lands with their southern cousins, and come north only when Spring has wakened the bright flowers with their deep nectar cups, from which these little birds like to drink.

What tells the birds, far away in those southern lands, that spring has come and that the flowers are full of sweetness in the gardens hundreds of miles to the north of them? I do not know. I only know that when honeysuckles or columbines begin to bloom, all of a sudden some day, you hear a loud humming among the flowers and see a ruby-throat hanging over a blossom, his slender bill deep in its nectar cup.

Whatever it was that told him, Ruby-throat knew, and he turned toward the north and started on his long, long

journey. For many miles his way lay over thick forests, where vines climbed the highest trees, their great scarlet and yellow flowers blooming in the tree tops. He feasted among these, eating his fill of tiny insects and spiders, and sipping drops of sweet nectar for dessert. Sometimes he rested on a twig, but most of the time he flew.

By and by, far ahead of him, Rubythroat saw no more trees, nor even bushes. In fact, he saw no land at all. Before him was only the blue, blue water of the sea. He had come to the shores of the Gulf of Mexico. Many miles away, across the waves, was the land to which he was going. He could not see it. He could see only water, and the sky that came down over it like a great blue bowl. But somehow he knew the land was there on the other side of those tossing waves.

Rubythroat rested awhile in a bush

on the seashore, picked some juicy green bugs from its twigs, and sipped sweet nectar drops from a crimson flower near by. This was his good-bye supper, and he ate a great deal, for he had a long journey before him.

When the sun was going down and the air becoming cooler, Rubythroat sprang into the air and darted off, straight across the water. He flew fifty miles an hour.

It was not long before the tiny bird was quite out of sight of land. Above him was the starry sky, below the tossing dark waves. There was not a tree upon which to rest nor a flower from which to sip sweet nectar. He could not stop, he could not rest, no matter how tired he might be. If his tiny wings stopped their fast beating, he would drop into the sea below and be drowned.

So Rubythroat flew on and on. The

moon rose in the east and climbed up the sky, and still the little bird flew onward. It was midnight, and he was still flying. One o'clock came, then two o'clock. He could not yet rest, for still there was nothing but water beneath him, and land was nowhere in sight.

At last, as the morning light began to break through the darkness, Rubythroat saw, far away, the dark line of the shore. At first it looked like a cloud on the rim of the ocean. But when he had flown a little farther he could see the water splashing on the beach, and vines and low bushes and trees growing beyond the sandy shore.

A little farther, and the weary little bird dropped into a bush, put his head under his wing, and went to sleep. He had flown five hundred miles, and had come at last to the shores of Florida.

The worst of Rubythroat's journey was now over, for the wide sea had

been crossed. From now on, when he was tired, he would always be able to find something upon which to rest, even though it were only a telegraph wire. And when he was hungry, there would always be bugs or gnats or spiders to eat, or sweet flowers to sip.

So Rubythroat did not have to hurry any more. But he still kept on his way. Resting when he chose, eating when he was hungry, and flying by day or night, he traveled on.

Everywhere Rubythroat stopped to rest there were flowers. Orange blossoms, peach and apple blossoms, daffodils, and a hundred other sweet-smelling flowers sent their pleasant perfume up to him as he passed by them. But none of these seemed just what he was looking for. In fact, he traveled hundreds of miles more before he came to the particular honeysuckles for which he was searching.

Rubythroat had passed many other honeysuckles on his way, but somehow none of them had exactly pleased him. But the honeysuckle vine at which he finally stopped seemed to be in just the place he wanted for his summer home. Perhaps he liked the little stream near by, with the pussy willows on its bank. Or perhaps it was the hillside full of ferns that pleased him. Or it may have been that he was tired of travel. I do not know what he liked best, but I do know that by day he flew among the flowers, and at night he slept on a twig.

After a few days had passed and Rubythroat was getting lonely, he heard a loud humming among the honeysuckles. It was not his own humming, because he was resting just then on a twig, his wings folded quite still. He shot out into the air to see who the visitor might be, and there, bill deep in a flower, was another humming bird.

The visitor was no bigger than Ruby-throat, and its back and wings were as bright a green as his. But instead of a shining rubythroat, it had only a patch of white. It was a female humming bird, and female birds never wear very bright colors. They generally spend much more time than their mates sitting on their nests. Bright colors would make them easily seen by their enemies. The quiet colors help to protect both the mother and her eggs and the young that hatch from the eggs.

Lady Whitethroat had made the same journey that Rubythroat had made. Perhaps she had crossed the Gulf of Mexico by way of Cuba and stopped there for a day or two. Perhaps she rested more on the way from Florida.

Rubythroat did not care what had kept Whitethroat. He only knew she was here now, and he was very glad. Now they could start housekeeping together, and soon there would be a pretty nest, and eggs, and by and by baby birds. So he flew to her, and darted around her in circles, spreading out his lovely ruby vest so that she might see what a handsome partner he would be.

Lady Whitethroat paid very little attention to Rubythroat. Her long journey had tired her, and she needed time to rest and feast and play awhile among the flowers, before she was ready to begin housekeeping.

It was not many days, though, before

Whitethroat began to notice Rubythroat as he circled around her. And at last came a day when she decided to be Mrs. Rubythroat, and off she flew with him.

But even yet the little lady was not ready to start housekeeping. It was such fun to fly from flower to flower, and rest whenever and wherever she chose. Housebuilding is hard work, and after her long journey she wanted a little more playtime. So June was more than half gone before she finally decided to settle down.

When Whitethroat did begin to work, however, she built a nest fit for a fairy prince's bed. The place she chose for it was a maple limb twenty feet above the ground, with big shady leaves hanging over it. On top of the limb she made a little pile of softest down. Some of it was silk from the pussy willows that had gone to seed by the brook. Some of it

was fuzz from the curling fern fronds. Some was wool from the opened hickory buds. And all of it was wrapped and tied together and fastened to the limb with the finest of spider-web threads.

After the pile was deep enough to make a soft, thick mattress, the careful little worker sat upon it, and turned around in it again and again. She did

this to shape it round and deep, so that she could not be easily seen. Last of all she brought green-gray lichens and fastened them onto the outside of the nest with more spider-web silk. When the nest was done, the outside of it looked exactly like a knot on the maple branch, but inside it was a lovely white bed.

It took a long time to make the nest, for Mrs. Rubythroat did not work on it all the time. She spent a great deal of time resting on the twigs near by, smoothing down her pretty feathers, or just looking about.

Mr. Rubythroat did no work on the nest at all. He spent most of his time perched high in some near-by tree. Now and then he did dart off for food, but he was soon back at his old resting place.

If anything came near enough to frighten the busy little wife, Rubythroat darted at it like a little fury. It might be another humming bird, for others

besides Rubythroat and his little mate liked this honeysuckle bank near the stream. It might be a crow flapping slowly over the trees or a great hawk swooping down to rest on a top branch. It might be a kingfisher shooting down to seize a leaping fish. Whatever it was, little or big, it made no difference to Rubythroat. He was so small, his beak so sharp, and he could dart so swiftly that he drove off any danger.

When at last the nest was done, Mrs. Rubythroat laid two wee white eggs inside it. They were less than half an inch long and very slender. In about two weeks two little humming birds hatched out of the eggs. They were without feathers and so tiny you could have put both of them into a thimble.

Now Rubythroat had to begin work in earnest, helping to feed the babies. And such feeding! Off the little father and mother flew to pick spiders or soft-

bodied plant lice off the leaves. When their mouths were full, back they came to where the babies were stretching wide their wee bills.

Mother and Father poked the food down the tiny throats. It looked every minute as though the long needle-like bills of the parents would drive holes straight through those tiny babies, but they never did.

Soon the young birds were covered with soft down, and then their real feathers began to grow. At first the feathers were wrapped about by tiny yellow quills, and this made the little humming birds seem prickly. It was not long, though, till the pretty green feathers broke out of their quills and the babies began to look somewhat like their parents.

But the little ones were not yet so beautiful as their parents. In place of their father's ruby throat or their moth-

er's pure white throat, theirs were white and had dark spots upon them. They would not have bright red or clear white throats till the next year.

At first Mother Whitethroat covered her babies with her warm body both at night and on rainy days. She even raised her soft white breast feathers so the little ones could cuddle closer against her warm flesh. And when the days were hot and the sun shone full on the nest, she stood above her babies and fanned them with her fast-moving wings.

But it was not long before the babies had grown so large that there was no room for their mother to rest on the nest. Their bills grew as fast as their bodies. In three weeks the little birds were ready to fly.

Then one day one of the babies climbed out on the edge of the nest. For a few minutes he clung there, fanning

his wings up and down. Then he sprang into the air and in a moment came to rest on a twig about a yard from the nest. Soon the other baby tried his wings, too. After a few trials, they both seemed to fly nearly as well as if they had always known how.

By this time summer was half gone. Still there were two months more before the Rubythroat family must start south again. The trumpet vine was blooming now, and the scarlet sage was in blossom. The humming birds loved both those flowers. There were plenty of insects to be found. The days were warm and sunny. It was a very happy time for all of them.

One day Rubythroat had an adventure. He had flown farther from home than at any other time all that summer. By and by he came to a house beside which sweet peas bloomed.

On the porch of the house was a

table on which sat a big bowl of the brightly colored sweet peas. Two ladies were sitting at the table drinking tea. When they saw Rubythroat, one of them moistened a lump of sugar and put it between her teeth. Then both ladies sat very still and waited to see what he would do.

Presently Rubythroat darted toward the bowl of bright flowers. Then, in a moment, he flew straight to the lady's lips and took a sip of the sweet sugary sirup. For an instant he hung over the lump of sugar, then shot away again.

If humming birds could talk to each other, Rubythroat would have had a strange story to tell his family that night. He would have told of the hard white flower that was so sugary sweet. Perhaps he would also have told of his plan to hunt it out again and so get one more taste of its sweetness.

At last summer was over. In place

of the scarlet flowers on the trumpet vine there were now long green pods. These looked like fairy boats growing together in pairs. The scarlet sage still looked as though it were full of flowers, but it was not. Where the flowers had been, dry red cups now waved in the wind, and where the drops of nectar once lay, tiny seeds now grew. The maple leaves were turning red and yellow. Some of them dropped to the ground when the wind blew hard.

Rubythroat and his little wife knew it was time to be starting south. Other humming birds in the woods and gardens about them were leaving, too. By the middle of October all of them had gone. Before winter had come to the north country, the tiny little birds had again traveled the fifteen-hundred-mile journey to the far, far south. They had flown over land and sea, back to the land where it is always summer.

Musquash the Muskrat

Musquash the muskrat is often called the beaver's little cousin. That is because he looks somewhat like the beaver, and because he lives in streams and ponds. But the muskrat really gets his name from the rat family. The big gray rat that gets into barns and chickens' houses and the little mouse that steals from pantries are his cousins too. But Musquash is much bigger than the mouse, and, although he looks somewhat like the mouse and the rat, he wears a much prettier coat than these cousins.

Musquash's coat is of beautiful dark brown fur, very thick and very soft. It keeps him warm as he swims about in cold water. But his tail is no prettier than that of any other rat or

mouse. It is long and slim and has almost no fur on it at all. Musquash's tail is different in shape from those of his cousins. The common rat's tail is long, and round like a twig. But the muskrat's tail is flat up and down and looks somewhat like the blade of a thick paper knife held edge up. Musquash's tail helps him a great deal in swimming. He uses it as a rudder to steer himself while he pushes himself through the water with his webbed hind feet.

The beavers who live in the same pond with Musquash do not like him because he often digs holes in their dams. When you think how hard beavers have to work to build their dams, you can easily understand why they do not like to have holes made in them. But Musquash does not dig the holes just to cause trouble for his neighbors. He is only making himself a home.

Muskrats do not seem to know that dams are of any use at all, for they do not need ponds so much as beavers need them. It is true they sometimes live in ponds, but they like just as well to live in marshes, or in holes in the banks of small, slowly moving streams.

When they find such banks they dig tunnels up into them to find a place in which to build their nests, and often they dig their tunnels through a beaver's dam. If a dam looks like a good place for a home, the muskrats dig right in.

Muskrats seem to like having people about, and so they often have their homes close to sawmills or factories along river banks. The people about such places drive away the foxes, wolves, hawks, owls, and other animals that like to eat muskrats. For that reason Musquash is much safer from his natural enemies when there are people near his home, but he is never altogether safe. His worst enemy is the white man himself, who sometimes sets traps for him. Muskrat fur is used to make coats and is expensive. But even though many muskrats are caught each

year, there are a great many more of them than there are beavers.

Musquash can live in many places where beavers cannot, for he can eat many more kinds of food than a beaver can. He eats grass and leaves, reeds, and the roots and stems of water lilies. He likes the sweet flag root that grows in the marshes. He eats clams and insects, too. Now and then he may make his dinner of a dead fish he finds floating about on the water.

The muskrat finds many things that he likes to eat in swamps and in shallow ponds and little streams. Since he does not need deep ponds in which to store his winter food he does not have to build dams as does the beaver. Yet for all that, muskrats are wonderful builders.

Far south, where the winters are mild, muskrats hardly take the trouble to build houses at all. They do not need

to do that. But in the north, where they live in big ponds that freeze hard in winter, they dig out big rooms that are connected by halls. Sometimes they build little rafts, on which they can sit, just as you have a front porch on which to sit on warm summer days. These rooms, halls, and porches are not all close together as are ours. They are scattered about the pond, and some of them are in its banks.

Indeed, the nursery bedroom of the muskrat is never in the water at all. It is high up in a bank, often under the roots of a tree, and always dry like a beaver's burrow. No matter how long you were to hunt about that tree for the doorway to this nursery bedroom, you would never find it, for the opening is somewhere down under the water of the pond or stream.

A long tunnel runs from the bedroom, through the bank, and then down under

the pond to the doorway where the muskrat enters and leaves. Muskrats are as good swimmers as beavers, and as long as they stay in the water, they are very much safer than they are running about on land.

Inside the snug little nursery is a soft, clean nest of fresh grass. There, early in the spring, the baby muskrats are born. They look like little pink mice at first. But they grow very fast, and in three or four weeks they are as big as chipmunks.

Then the little muskrats have their first fur coats. They are ready to go out and swim about just as their parents do. The first baby muskrats have to begin to take care of themselves very quickly, for before the summer is gone Mother Musquash will have to take care of other babies that will be born in the same soft, cozy nest.

In warm weather the muskrats do

not really need any house but the nest up in the bank. As long as the babies are in the nest, Father Musquash gathers grass and carries it inside to feed Mother Musquash. When the babies are a few weeks old, they sometimes eat a little of the tender grass, too. Later, when the babies are old enough to come out of the nursery, the whole family hunts for food along the shore.

If the banks are steep or slippery, it is not easy for Father and Mother Musquash and the Musquash children to climb out of the water onto the land. So they set to work and build landing places. They dig up mud and waterweeds from some shallow place near the shore, and heap them up in a pile close to the bank. This pile juts out into the water like a pier or wharf that people build out from the shore into the river as a landing place for boats.

When the muskrats have their wharf

done, they can then swim up to it and run along it to the shore. The water around it is deep, for the muskrats have scooped up the mud from the bottom of the stream and used it to make their landing place. So, if anything on shore frightens them, they can run out on their wharf, dive into the water, and soon be safe out of sight.

From the landing places the muskrats make tiny paths through the grass to the meadows, gardens, and wheat-fields that lie near by. In summer time they like a meal of fresh carrots now and then, or tender corn, or the sweet leaves and stalks of celery. So, if there is a garden not far from their home, the muskrat family will get into it. But usually they do not go far enough from the water to find gardens. Most of the green food they find is grass and reeds and flags that grow in the marshy meadows.

Many of the rivers in which muskrats live are also the home of fresh water clams. These clams, which are sometimes called mussels, are somewhat like oysters. They live inside two shells which are joined together by a sort of hinge. The little animals inside these shells can shut them very tight.

But tight though the shells may be, they cannot keep Mr. and Mrs. Musquash and their children out. The muskrats pull them up out of the water, take them up to a stone, or a log in the stream, and leave them there. Then by and by, when the clams have become weak from hunger and thirst and open up their tight shells, Musquash puts his forepaw into the opening, and pulls out the clam.

Often Musquash does not wait for the shells to open. He sits up like a squirrel and pulls them apart with his strong teeth and hands. If he cannot

open them in any other way, he nibbles the hinges and pushes his paw in at the back of the shell.

The muskrats are very fond of these juicy little shellfish, and sometimes they catch so many of them that, before the summer is over, they pile up more than a bushel of empty shells.

When the muskrats are not hunting for something to eat, they float in shady

pools under the trees near the edge of the stream, or swim round and round in circles in the deeper water. Often in the evening Father and Mother Musquash and all the children race and play together. They swim very fast, with only their heads and tails showing above the water. The waves spread behind them like a big letter V. So all the pond is covered with sparkling ripples, with here and there a muskrat nose and tail showing above the water.

But all good times have to come to an end, and by and by the summer is almost gone. Then the muskrats must get to work to make ready for winter. If they already have a good safe house for winter, they will not build a new home at all. They just patch up the old one. But if the old house has broken to pieces, or if the muskrats are young and have never had a house of their own, they have to build one.

On quiet days in early fall when the water is calm, you may see a pair of muskrats diving to the bottom of the stream and biting at the roots of the rushes that grow there. When one of the muskrats has torn off four or five long rushes, he gathers them together and swims with them to the place where the house is going to be built.

He straightens them out side by side and leaves them floating on top of the water. Then he brings more rushes and reeds and lays them across those of the first bunch. He crosses the next mouthful over these, just as you lay the first reeds for a basket you are going to weave.

The muskrats work in this way till they have made a round raft of rushes all crossing one another in the middle like the spokes of a wheel, and very close together. Then all day long you will see one or two of the furry little

animals sitting on the raft with rushes hanging from their mouths. They look as though they were eating the rushes, but they are not. They are biting off short pieces which they will weave into the long spokes.

Soon the pile becomes so heavy it sinks under the water. Then the muskrats lay more long rushes on top of the sunken raft, and work more short pieces in and out among the long ones. For weeks and weeks they keep at this work till they have a pile high enough to reach from the bottom of the pond to the top of the water.

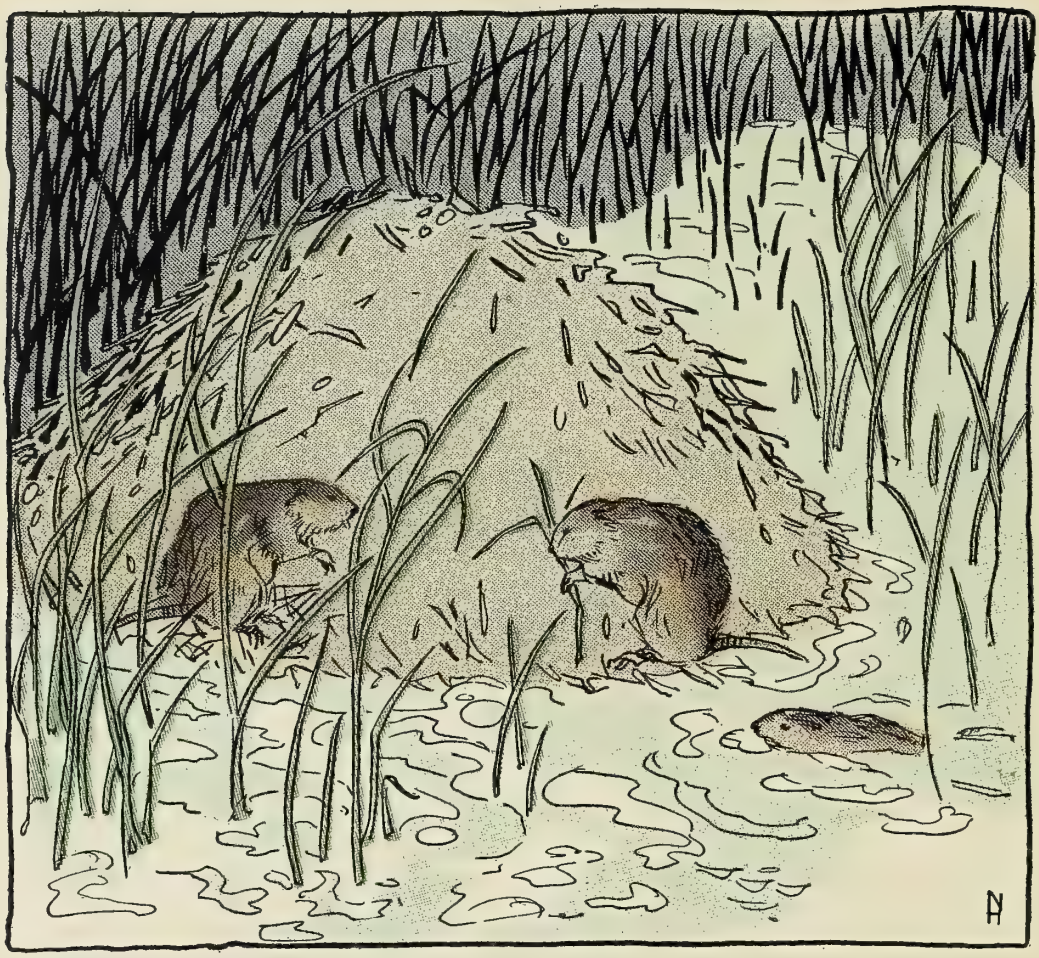
But the muskrats must continue to dive to the bottom of the pond and pull up rushes and water lilies by the roots. With these they build up the walls of their house. Sometimes they cover all the outside of the house with lily leaves, lapped one over the other like shingles on a roof. The leaves are then plas-

tered down tight with the wet sticky clay from the bottom of the pond.

Often the muskrats have to dig through sand to get the clay, but they get it just the same. When the house is done, the walls are about six inches thick, and the roof is so strong that a man could stand on top of it without breaking through it.

Not all muskrat houses are built on top of a pile of woven rushes, though. Sometimes they are made on mud foundations instead. The little builders work on the bottom of the pond, dragging a pile of mud, roots, and stems together. When the heap is high enough to rise above the water, the house is then built on top of it.

Some of the houses have just one room, and look somewhat like a bowl turned upside down. Others have two rooms, one upstairs, the other down, like two bowls turned one over the



other, and having a little passageway between them. The top room is always above the water, and the earth and sod at its top are piled loosely enough to let some air inside.

From the floor of the room a tunnel goes down through the foundation of the house into the earth at the bottom of the pond. Under the bed of the pond

this tunnel runs two ways. In one direction it goes toward the side of the pond and up through the bank to the nursery. In the other direction it runs to the middle of the pond where the water is so deep that it rarely freezes through, even in very cold weather.

So the muskrat family always have a passageway from the house in the pond to the room in the bank and to the open water in the middle of the pond. This makes it easy for them to get away if some enemy breaks into their house. Sometimes there are two or three tunnels leading into still other places in the pond.

Sometimes two or three muskrat families build one house for all of them. Such a house usually has four or five rooms, so that each family has its own room and its own tunnels. But all the members of the two or three families work together building the house.

No matter how a muskrat house is built, or how many families live in it, the walls of each room are snugly lined with rushes and grass. The inside of a room looks very much like the inside of a big round bird's nest that has been turned upside down. Each little room is warm and cozy, and the muskrats stay curled up in it most of the time during the long winter days.

Sometimes the air inside the muskrat's house gets so warm that the roots which have been built into the walls sprout, sending tender white shoots into the room. These, of course, are good food for the muskrats, who nibble them off as fast as they grow. Sometimes, too, the muskrats bite off mouthfuls of the reeds and grass from the inside of the walls. By the end of the winter the walls of the house may be very thin, because the little builders have eaten not only the soft lining of

them but even the roots and rushes of which they are built.

But Musquash has other things to eat during the winter besides the lining of the walls of his house. There are roots and stems growing in the bottom of the pond where he can get them, even though the surface of the water is covered with ice. These roots are like those of which his house is built.

There is another kind of root, which muskrats like very much, too. It is the yellow pond lily that looks somewhat like an onion. Sometimes they store away as much as a bushel of these roots before winter comes. The Indians used to like the roots, too, and they often broke into the muskrats' houses to get them.

But it is not easy for the muskrats to eat stems at the bottom of the pond, for they cannot stay under the water very long at a time. They can, indeed,

stay under the water only a few minutes, and then they have to come up to the top for air. While they have their heads out of the water they take a long breath, then they dive under and quickly bite off a stem or dig up a root before they have to come up for air again.

In summer it is easy enough for the muskrats to get up to the air and float on the top of the water while they chew their food. But in winter ice covers the pond and shuts the muskrats in. If they were to dart up to the top, they would only bump their noses.

Of course, the muskrat could get a mouthful of reeds and go up into the house to eat it, but think how much trouble that would be. Musquash has to go all about the pond to find food enough to last him during the winter, and sometimes he cannot find it growing near his living room at all.

So the muskrats make dining rooms in many parts of the pond. Early in winter, when the water begins to freeze, they make holes here and there in the ice by pushing their noses up against the ice, and breathing their warm breath upon it. Over each of these holes they build a little hut of mud and weeds, just large enough for one muskrat. By and by the snow covers the little hut and hides it from Musquash's enemies, who may be passing along the bank.

Now, when one of the muskrats gets a mouthful of food from the bottom of the pond, he does not have to swim all the long way to his living room. He just comes up to the dining room that is nearest to him and rests there till the food is eaten. Then down he goes to the bottom of the pond again for another mouthful.

No matter where these dining rooms are, they always have air in them, and

so the little animals can eat in them without having to hurry home to their living rooms. But sometimes when the winter is very long and very cold, even the dining rooms freeze over, so that the muskrats cannot get into them. Then Musquash and his family can get their breath only in the top room of the house or in the bedroom under the tree roots.

Once in a while they find a little air close up under the ice near the bank. Sometimes after the ice forms the water sinks a little, and then there are spaces full of air in between the water and the ice. But often there is very, very little air where the muskrats can get it.

You may be sure Musquash and his family are glad when spring comes once more. They begin very early to search for any holes where the midday sun has melted the ice along the shore. They pick these places in which to eat their

roots and rushes, just as men who work outside choose a sunny spot to eat their lunch on a cold day.

On the first spring days the snow on the hillsides begins to melt, and sometimes there is a great deal of rain, too. All this makes the water rise in the streams and ponds. Often the water rises so high that it gets into the muskrats' houses.

When the water rises so high, the muskrats must either get out of the pond or drown. They climb up on the tops of their houses, on logs floating in the water, or on brush piles at the edge of the pond. There they make a bed of grass and rest as well as they can till the water goes down.

After the spring floods it is usually not very long till the muskrats can once more begin to hunt along the shore. It is then time to clean out the nest under the roots of the trees, and to make a

fresh bed of new grass in the room. Soon there will be four or five new babies in the nest, and before many weeks have passed the whole happy family will be playing together in the pond under the willow tree.

The Puzzled Centipede

A centipede was happy quite,
Until a frog in fun
Said, "Pray, which leg comes after which?"
This raised her mind to such a pitch,
She lay distracted in the ditch
Considering how to run.

—UNKNOWN

Messengers with Wings

Bobby and Betty were twins, and their home was on a lovely big farm. They had all sorts of pets—a shaggy little dog that could stand up and beg, two black and white kittens, and a dear little brown pony. But the pets they loved best of all were Columbus and Columbine.

Columbus and Columbine were a pair of pigeons. Grandfather had given them to the children on the day that the twins were ten years old. Now the pigeons were the nicest kind of birthday present for twins, because there were two of them, and they belonged together just as a pair of shoes belong together.

Bobby couldn't take Columbus away

from Columbine to be just his pigeon, and Betty couldn't carry Columbine away to be only hers, for Columbus and Columbine belonged to each other, just as much as both of them belonged to the twins. Columbus and Columbine were mates, and they always would be. Pigeons do not have one mate one year and another the next, as many birds and animals do, but they stay mated as long as both of them live.

Columbus was the father pigeon. He was a lovely soft gray color, and he had bright red feet, and a beautiful blue neck and head. At least his neck and head sometimes looked blue, but sometimes when you looked at them they seemed to be green, and then again they looked purple. When the sun shone on them, they looked blue and green and purple all at once.

Columbine was the mother pigeon. She was a lovely soft gray color, too,

and she had bright red feet, just as Columbus had. But mixed in with the blue-green-purple feathers on her head and neck were some others that were rose colored.

The twins were never quite sure which pigeon was the prettier. They were glad that Columbine had rose colored feathers. For if she had not had them, the twins never could have told which pigeon was Columbus and which was Columbine.

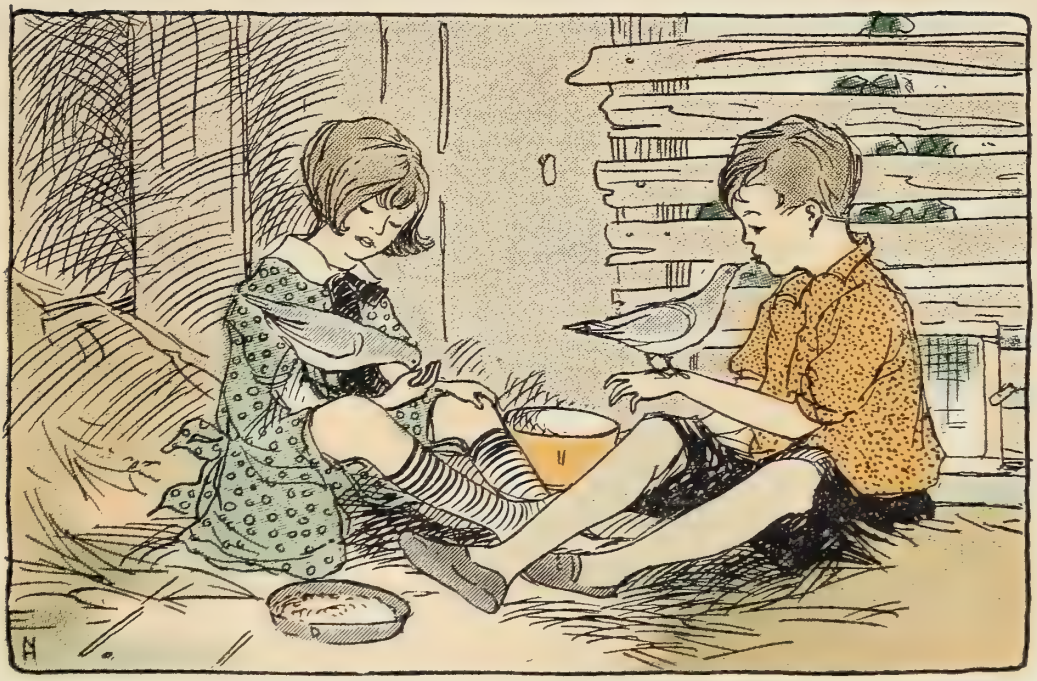
There was a big barn on the farm where Bobby and Betty lived. The top floor of the barn was the place where their father kept the hay for the pony and cows. But there was more than enough room for the hay, so Father turned the sunny south end of the hay-loft into a room where Columbus and Columbine might live. He nailed slats over the window on the south end. In this way the sunshine could get into

the loft, and yet the pigeons could not get out.

Bobby didn't like to think of the pretty pigeons' being shut up, for he knew that birds like to fly. But Father said that it would not do to let Columbus and Columbine out till they had become used to their new home. He said they would fly straight back to the place, a hundred miles away, where Grandfather had bought them, and then Bobby and Betty might never see their pets again.

So the pigeons were to stay a little while in the big sunny loft. The twins were to take such good care of them that the birds would never want to fly back to their old home. They were to have wheat and oats and corn to eat. There was to be fresh water every day for bathing and drinking. Their room was to be kept as clean as a pin.

There had to be clean grit, too, to



help the pigeons grind their food. For birds do not have teeth, and so they have to swallow their food without chewing it. For this reason they eat bits of gravel or of shell. Then, in their gizzards, the sharp grit rubs against the food and grinds it up, just as sharp little teeth might do.

Bobby and Betty were never too busy or too tired to feed and care for Columbus and Columbine. The pretty pigeons were very tame, and soon they flew to the shoulders or arms of the

twins, and ate from their hands. They became so friendly with Bobby and Betty that they would come close enough to peck at seeds held between the children's teeth.

In a few days Father thought it would be safe to let the pigeons out for a little while each day. So he cut a small doorway in the slats, and made a little wire door to fit the hole. He hung the wire door so that it would swing in. Then he made a little platform outside the door.

If Columbus or Columbine alighted on the platform, it would be easy to push on the wire door and hop into the loft. But once inside, they could not fly out unless some one raised the door for them.

The morning after the little door was finished, Father opened it and put Columbus on the platform outside. Then Bobby and Betty scattered oats

and corn on the floor of the little room, as they had always done at breakfast time.

Down flew Columbine from her perch on the wall. Through the wire door Columbus saw her and the breakfast on the floor. He pushed at the door, and it swung in. Before he knew what it all meant, he was down on the floor eating with his little mate.

At the next feeding time Father put Columbine outside the loft. Almost at once she pushed open the wire door and came into the room, just as Columbus had done before. In a few days Columbus and Columbine were so used to pushing in the door and coming into the room for meals that they did it every time they were put outside.

Then one night, after both birds were asleep, Father took off the little wire door and left the doorway wide open. Next morning, when the pigeons awoke,

the sun was shining outside, and there was nothing to keep them from going out to fly as far as they wished.

Columbus flew to the open doorway, perched there a minute, then up he went into the bright air. As soon as he was out of the doorway, Columbine then flew into the doorway, and a moment later she followed Columbus out into the sunshine.

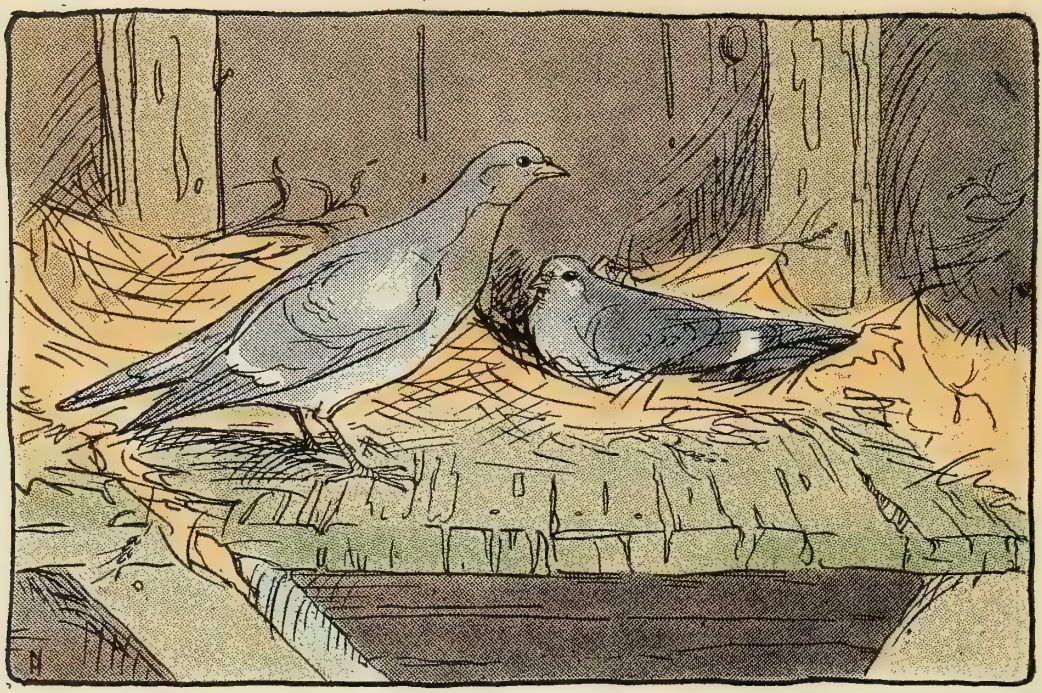
Away the two pigeons flew, up into the air together, wheeling round each other, turning, flying, back and forth. Bobby and Betty, watching from the hayloft, could hardly keep from crying. They were afraid their precious pigeons were gone forever.

But Father had told them what to do. Into the pigeon loft they ran, with grain in their baskets. They scattered the grain about, while they called the pigeons to breakfast, just as they had always done.

Up in the air, Columbus and Columbine heard the call, and down they came to the little platform just outside the loft door, scampering and tumbling over each other, both trying to get inside the little doorway at the same time. Bobby and Betty clapped their hands, but softly, so as not to frighten their pretty pets, and Father slipped the little wire door into its place again.

After that, every morning and every evening the door was left open just before feeding time, and the pigeons flew up into the air for a little while. But always when they heard the breakfast or the supper call, they dropped down and slipped inside their house.

About this time Columbus began to feel that it was time for him and Columbine to start building a nest. First he picked a place to put the nest. Then he got close behind Columbine and kept pushing and pecking at her,



till she finally went to work. Then he and she worked together till the nest was finished.

The nest was just a thin mat of small sticks, straw, and grass, not a very pretty nest at all. But it kept the eggs from rolling out and breaking, and it was smooth enough inside to make a good resting place for baby pigeons.

As soon as the nest was done, Columbine laid an egg in it, and two days later another. Then she and Columbus began to take turns at keeping the

eggs warm. Columbine sat on them from supper time until the middle of the next morning. Then she left to fly about and get food while Columbus sat on the eggs until she came back again late that afternoon. Day after day the birds cared for the eggs taking turns at keeping them warm.

The little door in the wire netting was always open now. Father said that now that the pigeons had a nest and eggs of their own they would never go back to their old home. But neither Columbus nor Columbine flew very much. They were too busy, and when one of them was sitting on the eggs, the other often sat on a perch near by as though for company.

For eighteen days the little father and mother kept the eggs warm. Then on the eighteenth day the babies pecked their way out of the shells. At first, they were almost naked, but soon they

were covered with soft, yellow down.

Columbine and Columbus were kept very busy filling the hungry mouths of their little ones. It was a funny sight to see the babies getting their bottles. For pigeon babies, like human babies, are fed on milk. Only pigeon milk is not just like other milk. It is made in the stomachs of the parent birds.

The father and mother birds eat wheat or other grains and seeds whenever they find them. This food is then changed inside the stomach of the bird into a liquid that is called pigeon milk.

At feeding time the old birds fly to the edge of the nest. The baby birds stretch out their necks, open their mouths wide, and make loud noises, so that they sound like human babies crying for their bottles. The father and mother push their bills far into the babies' mouths and pour the pigeon milk down the hungry throats.

The first time Bobby and Betty saw the babies being fed, they screamed and ran to call Father, because they thought the old pigeons were killing the little ones. But after that they did not worry, no matter how loudly the babies cried. They knew that the babies' cries meant that they wanted more milk.

Columbus took even better care of the little birds than did Columbine. Father pigeons always do. But that is only fair, for the mother birds do most of the work of sitting on the eggs.

How those baby pigeons grew! When they were four weeks old, they were larger than Columbus and Columbine. They were as fat as butterballs, and they were now ready to fly. By this time only Columbus was feeding them. Columbine had made another nest, laid two more eggs, and was already beginning to rear another family.

For a long time now the little birds

had not been fed on milk alone. Somehow the food which Columbus now poured into the hungry mouths of his little ones had changed so that it was harder and thicker than the milk he had first fed them. Columbus now brought them even whole grains of wheat and oats, just like those which he himself ate.

Soon the young pigeons were big enough to fly out of the nest where they had grown up, and to begin to take care of themselves. At first they did not know what to do. Columbus had to fly down by them and show them how to find the grain that Bobby and Betty scattered for them. Sometimes he had even to pick it up and put it into their mouths.

After awhile the baby pigeons began to pick up the grains for themselves. It was time they learned to take care of themselves. Columbus had no more

time for them now. He had to help Columbine keep the new eggs warm.

Father said pigeons that were big enough to take care of themselves were big enough to have a house of their own. So he set aside a part of the pigeon loft with a piece of chicken wire, and put the young pigeons into it. He made a door in this part too, but it was kept closed for a few days.

Bobby and Betty went to the loft every day to feed their young birds. They took even better care of them than they had of Columbus and Columbine, for they knew these little birds had not yet learned to take care of themselves very well.

In less than a month the young pigeons were as grown up as their father and mother. They had molted their nest feathers, and they now had a whole new set. One of them looked just like Columbus, and had the same kind of shiny

blue-green neck and head. But the other was not like either Columbus or Columbine. Its body was gray like the bodies of the older birds, but its neck feathers were a lovely rosy red like those on Columbine's throat. The children named these young pigeons Rainbow and Rosebud.

Rainbow and Rosebud were trained at first just as their father and mother had been. Their door was left open only a little while each day just before mealtime, so that they could fly out into the air for a short time. Then, before they had gone too far away, they heard the call to breakfast, and raced each other back again, each crowding and pushing to be the first inside the little door. Soon they learned to know the way home as well as Columbus and Columbine knew it.

When the young pigeons were two months old, their really hard lessons

began, for Rainbow and Rosebud were going to learn to be real racing homers, so that they could find their way home even though they were hundreds of miles away.

Father looked them over very carefully before he began to train them. He knew that if they were not fine, strong birds they could never learn to fly fast and far enough to be worth training.

It takes strong wings to fly through the air as fast as racing homer pigeons do, for such birds can beat the fastest express trains. Their tails must help them to steer their flight in any direction they want to go, just as a rudder steers a boat, or a boy steers his sled with his foot. And their eyes must see far ahead and show them which way to go.

If pigeons have strong bright eyes, they can see where to fly in all kinds

of weather, for they have three eyelids. They can shut one, or even two, to protect their eyes from storms, and still see where they are going.

Rainbow and Rosebud were both big, healthy pigeons. Their eyes were clear and bright, and their wing feathers and tail feathers were long and broad. Father said he thought they would make fine homers, and he promised the twins to begin training them on the very next Saturday if it was a clear day.

Saturday morning Bobby and Betty awoke before sunrise, and ran to the window to see what kind of morning it was. The sky in the east was a lovely, rosy red, and just as they looked out, a line of shining light stretched along the edge of the world, and the sun's rim began to show. Not a cloud was to be seen, and the twins clapped their hands for joy as they ran to dress.

You may be sure that they dressed as fast as they could that morning.

Breakfast was served very early that day, for Bobby and Betty were so excited that everybody tried to help them get an early start. As soon as breakfast was over, Rainbow and Rosebud were caught and put into a basket, and Father and the twins started up the road together. They walked for nearly half an hour, till they came to a big oak tree by the roadside. This tree was a mile and a half from their home.

By this time Bobby and Betty were beginning to be anxious. They wondered whether their pretty pigeons would ever find their way back home, or would fly off through the woods and never come back again. Betty was almost crying when Father opened the basket and took out the two beautiful birds. She wished nobody had ever thought of training the pigeons.

But when Father put Rainbow into Betty's hands and Rosebud into Bobby's, the children held the birds close for a minute. Then when Father counted, "One, two, three," both children tossed their pets up into the air as high as

they could. Then they stood watching, their eyes wide open, to see what the pigeons would do.

Up flew the beautiful birds. They circled round in the air a moment, then turning, flew straight down the road along which the twins had just come.

"They'll be home a long time before we shall," said Father. And so they were, even though Mr. Brown came by just then in his automobile, and picked up Father and Bobby and Betty, and whisked them all home in a jiffy.

When the children hurried out to the pigeon loft, there were Rainbow and Rosebud inside, eating their breakfast as though they had never been away.

After that Father had to use his own car when they took the pigeons away for their practice, because every time they went farther away from home than they had gone the time before. The second trip they went three miles,

and later, five miles, ten miles, fifteen miles, and at last twenty-five miles.

The day Father took them twenty-five miles away from home the children did not toss Rainbow and Rosebud up together. They started Rainbow first, and waited two or three minutes before they let Rosebud go after him. They did this to teach the pigeons to find their way home alone.

For a while after that the birds did not get any longer practice trips. But whenever Father and Mother and the twins went out for a long drive in the automobile, they took Rosebud and Rainbow along. Then when they had ridden as far as they were going, the children let their pets out of their basket. Sometimes they let Rosebud go first and sometimes Rainbow, but no matter which it was, both birds were safe at home when the family came back from the drive.

Then one day Father had to go to the city fifty miles away. This was a fine chance to give the pigeons a longer trip than they had yet tried. So when Father started off in his car, he took Rosebud and Rainbow with him in their traveling basket.

Two hours afterward the telephone bell rang, and Bobby ran to answer it. He heard Father's voice. "I got here a very short time ago," he said, "and I let the pigeons go five minutes ago. It is exactly three o'clock now. Watch for them and note the exact time they get home."

There was no need that afternoon for Mother to say, "Why don't you children play outdoors? It is bright and sunshiny outside today." For Bobby and Betty went out-of-doors just as soon as Bobby could set the watch that he had got for his last birthday present.

"It will be a long time before they get

here," he said to Betty, "but we'd better be watching for them."

It was exactly thirteen minutes after four when there was a whir of wings outside the pigeon loft, and through the open door flew Rainbow, down to the feeding floor, where his supper was scattered. Two minutes later there was another flutter of wings, and down dropped Rosebud to the floor by Rainbow's side.

Just then Bobby saw something shining on Rainbow's leg. It was a little

silvery tube, and when Bobby opened it, he found a piece of thin tissue paper rolled up inside. "There's writing on it," he cried to Betty, and both twins unrolled it and read together:

Dear Bobby and Betty,

This is the way pigeons carry messages. Don't you think they are pretty good messengers?

Father

Father came home next day, but it took him two hours to drive the fifty miles. "I should have been arrested if I had tried to drive as fast even part of the time as the pigeons flew all the time," he said. "And I shouldn't have wanted to try it, anyhow. They went forty miles an hour. That is too fast for me."

The Pigeon House

Look! Here's a pretty pigeon house!
  In every narrow cell
A pigeon with his little wife
  And family may dwell.

Their beds are only made of straw,
  The rooms are dark and small;
But many though the pigeons be,
  There's room enough for all.

How soft and low their cooing sounds,
  As each one says, "Good-night!"
How cheerful when at early morn
  They dress their feathers white.

Then far into the woods and fields,
  To seek their food they fly,
Returning to their house betimes,
  When sunset gilds the sky.

—UNKNOWN

Beaver Pond Pets

Jimmy Price was sure that spring had come to stay. The sun beamed brightly down on the little patches of ice left along the road, making dazzling little islands of them in a sea of black thawing earth. The crisp air blew strongly against his cheek, for Jimmy was running. School was just out and he wanted to get to Beaver Pond to see if any beavers were out of their winter homes.

Beaver Pond was on Mr. Price's farm, and Jimmy's father did not allow anyone to trap the little animals. Mr. Price was a little boy when the first pair of beavers came there to live. No one had ever bothered them and they had gradually learned to know that

they were safe. They played in the sunshine much more than the beavers in other ponds along the stream. Jimmy had not seen any of the beavers all winter, for it had been very cold and Beaver Pond had been covered with a sheet of ice.

As Jimmy hurried along, he wondered about one particular beaver family. They had a home on an island near the edge of Beaver Pond. Jimmy could watch this family better than any of the others, and he had grown very fond of them. The father beaver he had named Brownie because his fur looked like beautiful brown velvet. The mother beaver Jimmy called Diver. She was very graceful in the water. She was a little smaller than Brownie, or Jimmy never could have told the two beavers apart.

Jimmy moved very quietly as he neared Beaver Pond. He knew that

beavers are easily frightened. He peered around the side of a big tree, and can you believe it? Brownie was sitting on a big stump right in the middle of the pond.

Brownie did not look as neat and sleek as usual that afternoon, but Jimmie was glad to see him anyway. His long brown fur was so caked with mud that

it looked like short porcupine quills sticking out on him. His little round ears, which were generally hidden in his thick fur, stood out at the sides of his head. He seemed to be listening for something.

Brownie had a good reason for being on the watch. The young beavers, that had been babies only the spring before, were splashing about in the pond, wrestling, and chasing one another. Jimmie counted: One, two, three, four, five! Yes, they were all there. He could hardly keep from shouting for joy at seeing his old friends. But he wondered where Diver was.

Just then Jimmy saw her, swimming along with a bundle of small twigs in her mouth, and he knew she was building something. It was like Diver, Jimmy thought, to start work so early in the spring, for she was the busiest little animal he had ever seen.

One of the older sons of Brownie and Diver had found a mate and Diver was helping them to build a house. Diver knew that before long they would have four or five babies to take care of, and she wanted their house to be ready. Beavers are always very thoughtful parents. Brownie soon dived into the water and set to work, too. He had only been taking a little rest.

Jimmy was getting very tired standing still, but he was afraid a single move might frighten the lively young beavers. He liked to see them cut through the water like tiny motor boats, followed by a wedge-shaped streak of ripples. They folded their small black front paws against their bodies as they swam. These paws were of no use at all in swimming. Beavers use their long, strong claws on these feet to dig ditches and tunnels.

But how could the beavers move so

swiftly? Jimmy had tried to imitate them, but he couldn't. He knew they used their broad hind feet as paddles. They were webbed, like the feet of a duck, with tough skin stretched between the toes. Beavers can move these feet very fast.

A beaver also uses his tail to help him in swimming. This queer tail is nearly a foot long, as wide as a man's hand, and a little thicker. Instead of being furry like the rest of the body, the tail is covered with coarse brown scales. When a beaver swims, the tail is turned edgeways and makes a very good rudder.

One of the little beavers hopped up on a log. He bent his tail underneath his body and sat on it just as you sit on a cushion. Jimmy knew he was going to comb his fur. He stroked his fur with his front feet, then with the double claw on his right hind foot he

combed and combed. When he had reached as far as he could, he smoothed the rest of his fur with the claw of his left hind foot.

The babies seemed tired of romping, so Jimmy became interested in the house which Brownie and Diver were building. Some of the two-year-old children that had not yet found mates were helping with the work. Jimmy decided to watch the beavers every minute he was not in school or helping his mother. He wanted to see just how his friends worked.

The spot where the new beaver home was being built was about fifty feet from the bank. Beavers like to build their houses on islands because a great deal of hard work is saved, but all the islands in Beaver Pond had been used. This house had to be started on the bottom of the pond.

Brownie and Diver and the young

beavers piled up mud and sticks and sod until they had a platform a little above the surface of the water. This platform was to be the foundation of the house. It was twelve feet across at the top. The sides of it sloped into the water so that at the bottom of the pool it was sixteen feet across.

The next thing the beavers did was to lay the floor of the house. They covered the pile of grass and mud evenly with twigs which they cut from the willow trees at the edge of the pond.

Then the beavers piled mud on the platform until they had built up a heap which covered the platform to within a foot of the edge all the way round. This pile of mud was about three feet high in the center and had sloping sides.

Poles five or six feet long were leaned from the outer edge of the heap of mud so that they came together in

a point over the middle of it. The upper ends of the poles were fastened tightly together with small twigs so that they could not slip. This was the framework of the house. Then the beavers started filling in the spaces between the poles at the top of the framework with twigs and small branches. The ends of the twigs were woven in, making the work look a great deal like the bottom of a bushel basket. It was nearly a foot across when it was finished.

Now the beavers piled mud and grass and small sticks around the outside of the framework until there was a solid covering nearly a foot thick over the poles. The woven top of the mound was not plastered with mud. The tiny holes between the twigs would let a little air pass into the house. That was all the air the beavers would need when they were inside.

While the mud was still wet, the beavers laid tree branches on it, and pressed them into it with their big, strong tails. The hot sun baked these branches into the mud, and it would have taken a very much stronger boy than Jimmy to pull them loose. Then the beavers piled more branches over

these until the house looked like an old brush pile sticking up in the pond.

The house now looked entirely finished from the outside. But how were the little animals to get inside? There was no door anywhere.

That did not worry the beavers at all. Down they dived, about three feet under the water, and soon they were busy digging a tunnel up through the pile of mud and grass upon which they had built their house. They clawed out the dirt with their strong front feet, and before long they had dug through the hard foundation and floor of their house. Then they were inside, under the thick walls.

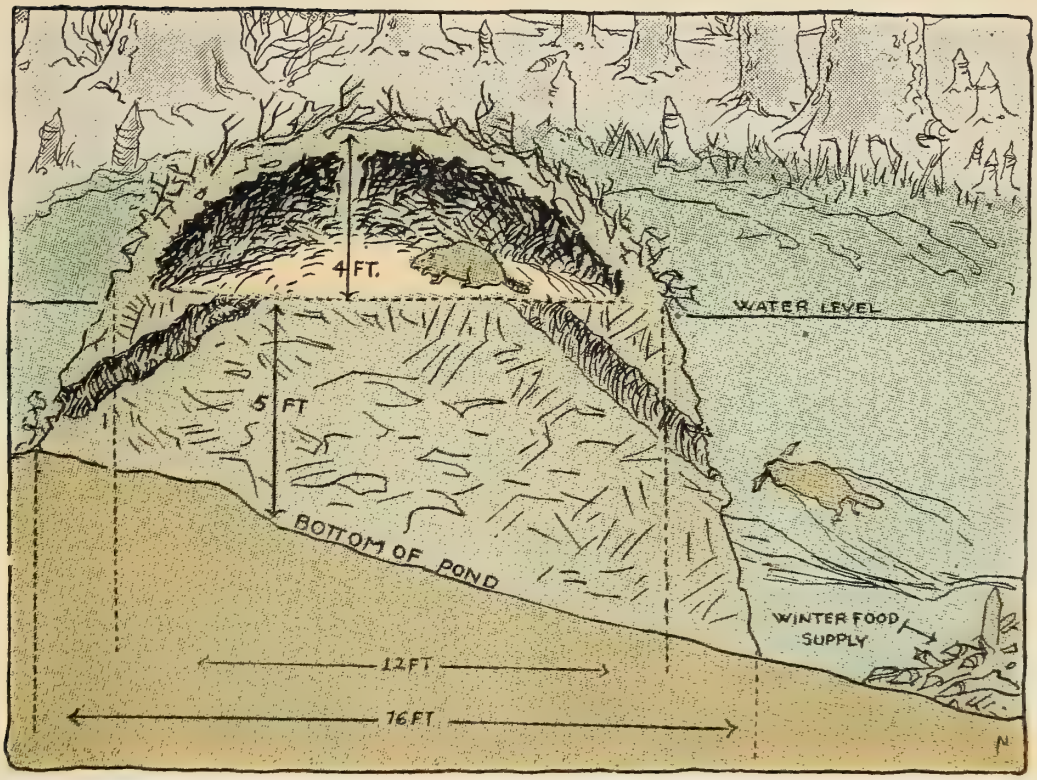
To be sure, there was not much room inside the house, for the heap of mud in the middle took up most of the space. But this pile of mud had been needed only to brace the poles before they were cemented together with mud.

It was no longer of any use, so the next thing the beavers did was to get it out of the way.

They worked very hard, for they had to carry all the mud out in their fore-paws. They scooped the mud up little by little, and carried it away through the tunnel that led through the floor of their house down into the water of the pond outside.

But even when that work was done, the beavers were not satisfied with their house. The inside of the walls that they had so carefully built was rough with twigs which had been mixed with the mud. So the beavers gnawed off the ends of the sticks till they had made the walls quite smooth.

Now there was just one thing to be done before the house was complete. A tunnel had to be dug through the foundation to a spot on the bottom of the pond where food would be stored



for the winter. This passage was made as nearly straight as it could be so that branches could be pulled through it easily. The other opening to the house had curves in it. It was like a stairway with rounded steps instead of the kind with square edges that we use.

I wonder whether you have any idea how big this new house really was. It stood about four feet high above the water of the pond, and its foundation

went down to the bottom of the pond. That was five feet more. So, if you were to measure from the lowest part of the house, at the bottom of the pond, to the top of the mound-shaped roof that rose above the water, you would find the house to be nine feet high. That is just about as high as your bedroom at home. And this was not an unusually large beaver house, either. A beaver house is seldom more than four feet high above the water, but some of them are as much as twenty feet across. A single mound-shaped beaver house is called a lodge.

Sometimes, though, beaver families build their houses together. Often pairs of young beavers will add rooms to the old home, until the house is very large. Indeed, some are as much as thirty-five feet across. Just think of these little animals piling up mud and sticks and bits of sod to make a heap big enough

to cover your schoolroom floor! Very large beaver houses like that are a great many years old.

You might think Brownie and Diver stopped working when the home of the young beavers was finished, but they did not. They started right in digging a burrow into the bank of the stream. They chose a spot at the side of the pond, under the water. Then they began to dig into the bank, and they kept on working until they had dug a long tunnel. As this tunnel went into the bank it sloped upward, little by little, until it was above the level of high water in the pond.

The beavers made their tunnel about fifteen feet long. At the far end of it, where it was dry, they hollowed out a big room that was to be used as a safe den. They then had two safe hiding places, their lodge and their den. Beavers use their dens most during the

summer. During the cold winter months the lodge is warmer.

Sometimes beavers make long, long tunnels running under the bottom of the pond. Often there are several of these tunnels running under the beaver pond and crossing one another much as do the streets in a town or village. Sometimes a very long tunnel runs from one beaver pond to another. Through these underground passages the beavers travel about, safe from their enemies.

But Beaver Pond already had a number of tunnels underneath it, so Brownie and Diver and the young beavers didn't start any more. They were ready to help to repair the dam. When that was finished their spring building would be done.

A beaver dam, you know, is a bank or wall of earth, sticks, stones, and logs built so that it holds back the water of a stream and makes a pond. This wall

cannot be weak at any place, for the water would break through there and run out of the pond. So every spring and every fall Brownie and Diver and the rest of the beavers mended all the weak places in their dam. They added a stronger log here, or a pile of mud and twigs there.

One day Jimmy's father told him how the beavers had built the dam when the first pair came to live in that part of the creek. They picked the spot, Mr. Price said, because it was densely covered with alder bushes and poplar trees.

The ground at the edge of the stream sloped like the edges of a huge saucer. The first dam was built only three feet high and twenty-five feet long. It caused the water of the pond to cover only the middle of the saucer.

But as more and more settlers came to Beaver Pond the dam was made

longer and higher. Now it was one hundred feet long and nearly five feet high. It was two feet wide at the top and, Mr. Price said, it was twelve feet across at the bottom of the pond.

The first settlers in Beaver Pond had begun building by cutting down trees that grew along the bank of the stream at the place they wanted the dam. With their sharp front teeth the beavers cut

more deeply into the wood on the side next to the water than on the other side. In this way they made the trees fall into the pond.

When they had cut enough trees on each bank so that the limbs met in the middle of the stream the beavers began working from the bottom of the pond. They piled leafy twigs and mud and stones so tightly against the tree branches the water could not get through. They built the wall higher and higher until the whole stream was held back, and the water backed up and spread over the meadow.

The father beavers generally went off on a short exploring trip upstream as soon as the dam was mended in the spring. Maybe they did this to get food somewhere else and save the supply near home. Although there was no work to be done, they never went far. They seemed to be afraid something

might happen to their mates and their children, who were left at home.

Jimmy happened to be at the side of Beaver Pond the next day when the father beavers started off. Diver and the children were sitting on a log seeing them off. Jimmy was sure that Brownie did not want to leave his family. He was the last one in the procession. He seemed to be waving good-bye with his scaly tail.

After school closed for the summer, Jimmy was busy trying to keep the weeds out of his mother's garden. He could not spend much time watching his beavers, but he did not care much. Every time he went to Beaver Pond it was a very quiet place indeed.

Jimmy watched the young beavers splash about in the black shadows cast by the big trees at the edge of the pond, or squat on logs or stumps in the thick shade of the poplars, or nibble on bark

or young shoots. They had eaten and eaten until they had grown to be nearly two feet long and weighed thirty or thirty-five pounds. They were almost as big as Brownie now.

Jimmy seldom saw either Brownie or Diver. He knew that Brownie was making trips here and there, but he couldn't see what was the matter with Diver. She would shoot out of her lodge, nibble hastily at a water lily stalk or a young branch and go right home.

Jimmy walked down to Beaver Pond about noon one day early in July to see what the beavers were doing. It was an unusually bright day. The big water lily pads lay idly on the water, staring up at the deep blue sky. The leaves on the poplar trees rustled just a little in the gentle breeze.

The young beavers were lying about on logs. Everything was very quiet. Then Jimmy heard a faint splash and

saw Diver coming up to the top of the water. She was swimming ever so much more slowly than she usually did. But she had a very good reason. She was bringing four beaver babies out for their first swim. They were as cunning as little kittens, with long brown fur and the tiniest beaver tails.

Jimmy could not believe that they had never been out of the lodge before, even though this was the first time he had seen them. They were swimming about as well as the middle-sized beaver children, or as Diver herself.

Jimmy hurried home to tell his father about the baby beavers. Mr. Price said they must be about a month old, for baby beavers generally came to Beaver Pond about the first of June.

Diver now spent all of her time watching her babies and teaching them how to find food for themselves. She showed them where to find the sweet

young water lily stems which all beavers like, and just what parts of twigs and young branches are best for baby beavers to eat.

When the babies grew stronger, Diver took them and the middle-sized children on short trips. They never went far from home, for there were some hawks living near by that liked to eat baby beavers. Diver did not want her babies to be killed, so she kept them close to the lodge, where they were safe.

Day after day Diver guarded her babies from harm. She taught them a signal that meant danger was near and all of them soon learned to obey it. When she saw a hawk flying overhead, or any other kind of danger near, she slapped her broad tail on the water so hard that it could be heard all over the pond. Then the baby beavers dived toward the lodge or the burrow, and scrambled inside as fast as they could.

Diver taught the babies to look around very carefully before coming out of the water again, to see whether the enemy was gone. She wanted them to know how to take care of themselves, for soon she would have other work to do.

Jimmy began to notice that already there were a few signs of autumn. Grass in the meadow was getting dry, and the leaves on the trees were beginning to curl at the edges and change color. He knew that Beaver Pond would soon be a busy place again.

Brownie was staying home more now. Just as soon as he and Diver saw the changes which meant fall was coming they began to get ready for the winter.

The first thing they did was to gather their winter food, before the sap of the trees went down into the ground and left the wood dry. In the summer beavers can find all they want to

eat in and around their pond, but they must store away their winter food, as a great many small animals and birds do.

A clump of young poplar trees happened to grow near the home of Brownie and Diver, so that is where they began work. The trees were small, no bigger around than a baseball bat, and before long all of them were cut down.

Beavers have four very wonderful front teeth, which they use to cut down trees. A grown-up beaver can cut off a branch as big as your finger at one bite. When beavers are very young their teeth are not much thicker than your finger nail, but even then they are long and strong and have edges as sharp as knives.

No matter how much their teeth are used, they always stay long and sharp. They sharpen themselves, and grow as fast as they are worn out. The teeth

of little beavers are white, but those of old beavers are stained a deep orange color from the sap and the bark of the trees they cut down. Even if the beavers tried, they could not clean their teeth, for these stains will not come out. From the bark of some kinds of trees is made some of the strong dyes which are used in our dark clothing.

Brownie and Diver gnawed the poplar trees into sections and dragged the pieces to their pantry. This pantry was near the middle of the pond, where

the water was deepest and very seldom froze. The tree branches and pieces of the trunks were piled up and weighted down with mud and stones.

The old beavers cut down one tree which they could not move by themselves, so they got the middle-sized children to help them. The tree was about a foot in diameter, and grew nearly ten feet from the edge of the pond. They cut it down so that most of it fell into the water. The large part below where it divided into branches they cut up into short logs. The small branches were cut into pieces five or six feet long.

When a log was cut, all the beavers helped to move it. Some of the little furry animals stood up on their hind legs and pushed with their hands. Some of them leaned against the log and pushed with their bodies. They put their tails flat on the ground to brace

themselves. So, little by little, the busy little workers pushed and tugged till at last the log tumbled into the water. Then they pulled it to the pantry.

Day after day the beavers worked, and day after day the pile of logs in the water grew bigger. The work seemed so hard for his friends Jimmie wished he could help. But they would not work unless he was a long distance away.

You might think that now the pantry was filled with food enough to last the whole family all winter, Brownie and Diver would have no more work to do. But not so. They had to help the other beavers mend the dam. Then they had to plaster the weak places in their house with mud and sticks.

The inside of the house had to be put in order, too. There had to be fresh beds. The beavers made them of thin strips and shavings of wood,

that they pulled to pieces with their sharp teeth. It was hard work, but the beds were very comfortable when they were finished.

So the beavers worked for two or three months, getting in their winter food and putting their home in shape. But they did not go into their house to stay until they had to. The inside was close and dark, and there was nothing to do but to sleep or go down to the food pile for a stick to gnaw. So long as the water was not frozen over they swam about, climbed out on the bank, or rested on top of their house in the winter sunshine.

There was not much more time now, though, to play about outside. The days grew shorter and colder. Snowstorms came, and freezing winds, and by and by there was a thick roof of ice all over the pond.

But snowstorms and cold winds could

not harm Brownie and Diver and their family. It was warm and safe inside their home, and there was plenty of food in the pantry. Jimmy did not like to have his beavers inside where he could not see them all winter, but he knew that they were better off than a great many animals are through the bitter winter months.

The Year's at the Spring

The year's at the spring,
And day's at the morn;
Morning's at seven;
The hillside's dew-pearled;
The lark's on the wing;
The snail's on the thorn;
God's in His heaven—
All's right with the world.

—ROBERT BROWNING

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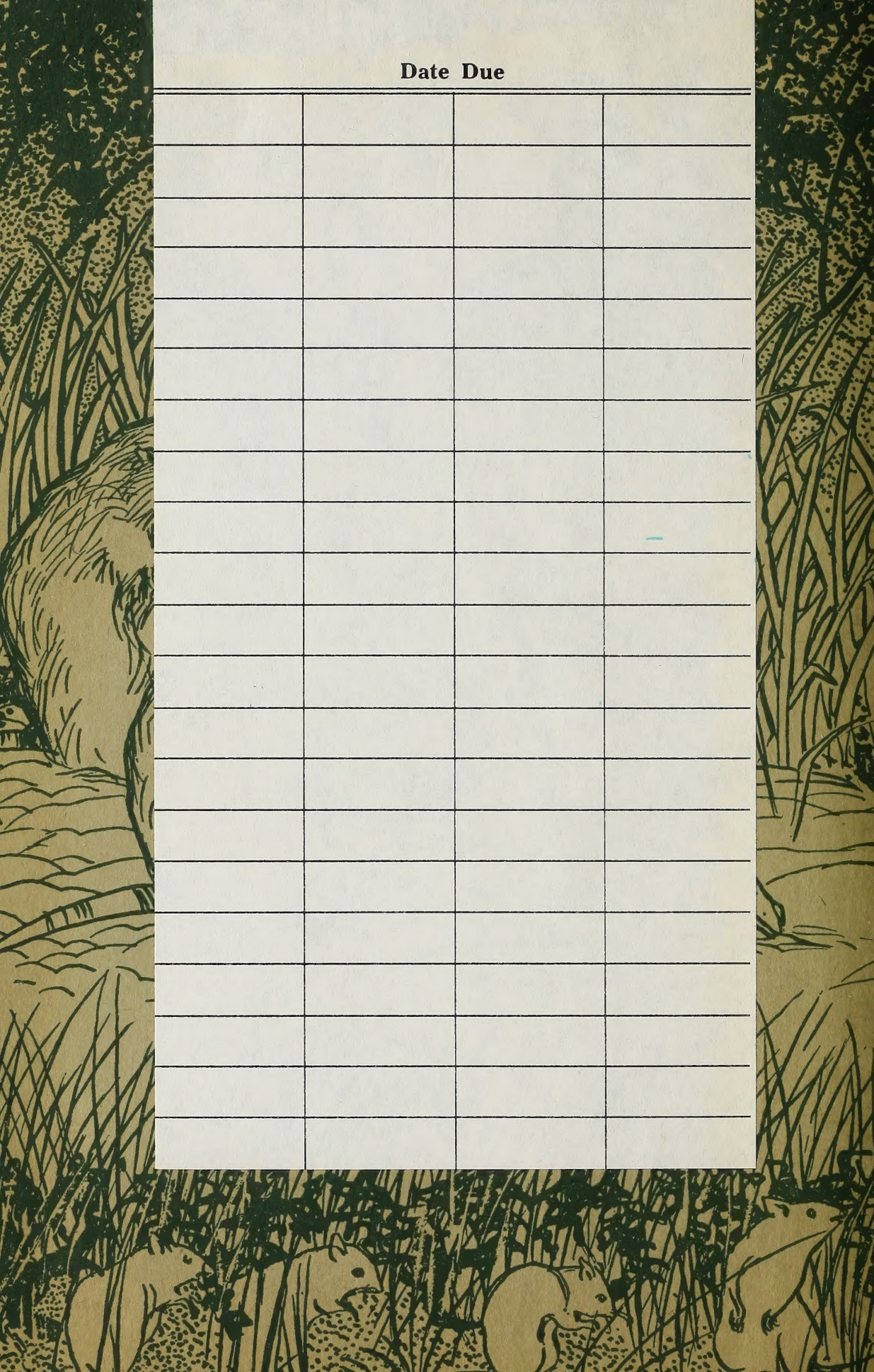

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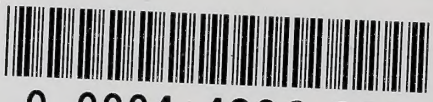

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